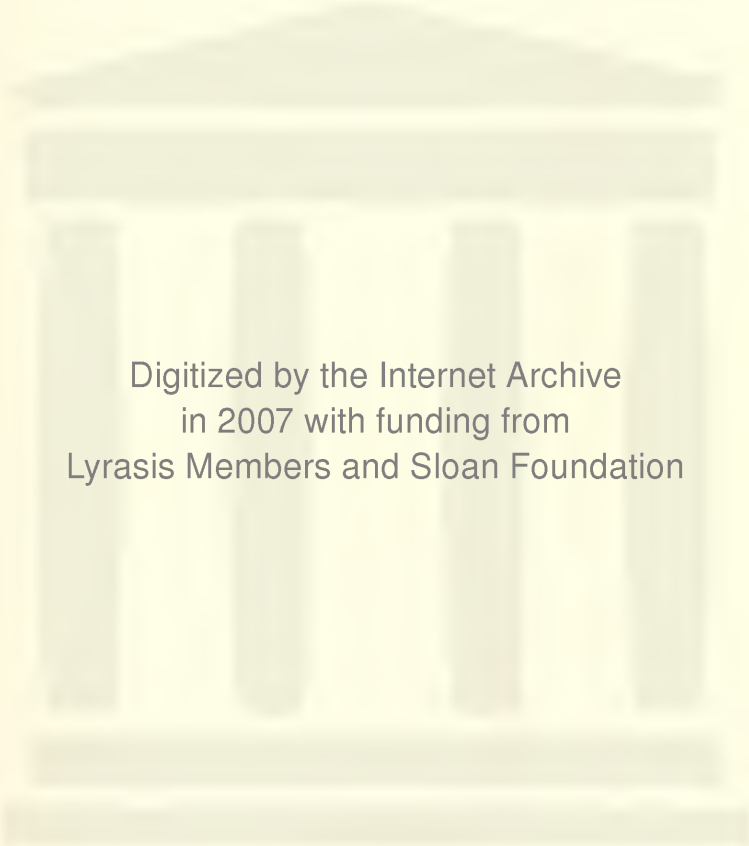


*The
American
University
Library*

WASHINGTON, D. C.





Digitized by the Internet Archive
in 2007 with funding from
Lyrasis Members and Sloan Foundation

Ref
Desk

Copy

CATALOG ISSUE

**THE
AMERICAN
UNIVERSITY
BULLETIN**

1968

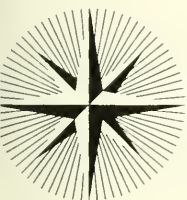
1969

WASHINGTON, D.C.

**THE AMERICAN UNIVERSITY BULLETIN
1968-1969 CATALOG ISSUE**

REGULATIONS SUBJECT TO CHANGE

Because of the nature of the educational process, the admission requirements, courses and degrees available, degree and graduation requirements, charges, costs and other information contained in this Bulletin are subject to change without notice by the University and are to be considered as informational only and not binding in any way on the University. Each step of the educational process from admission through graduation requires approval by appropriate University officials. The University reserves the right to change any requirement, to deny admission, and after a student is admitted to require a student to withdraw or to refuse to grant a degree if a student does not satisfy the University in its sole judgment that he has satisfactorily met its degree requirements.



THE AMERICAN UNIVERSITY BULLETIN 1968 1969

Information as of July 1, 1968

LD
131
A81A1
1968-70
RARE

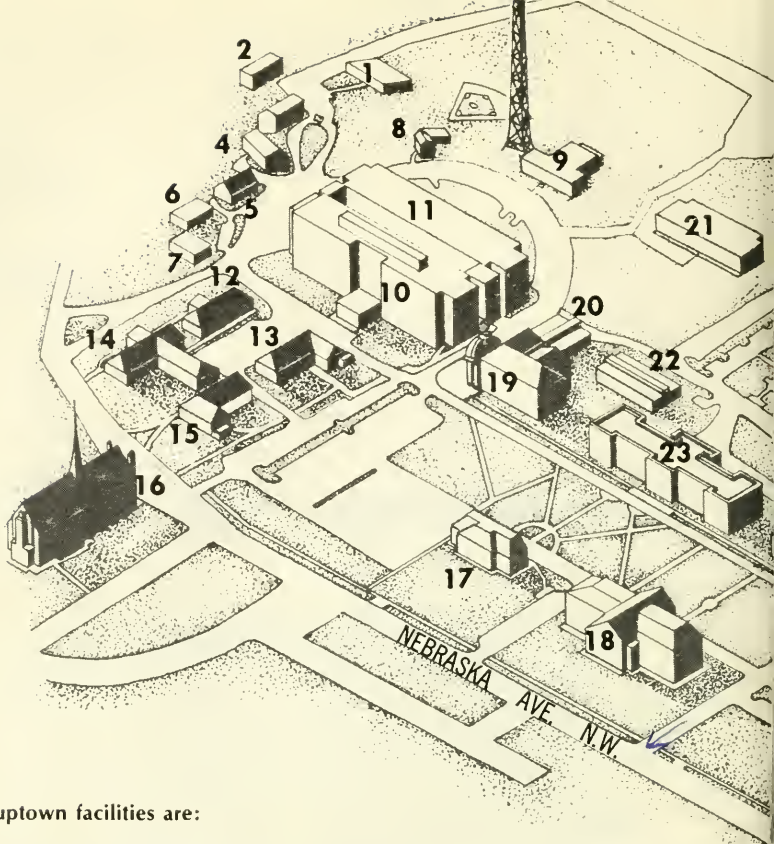
1968-1969 | ACADEMIC CALENDAR

<i>September 18</i>	Fall Semester classes begin
<i>November 28-December 1</i>	Thanksgiving holidays
<i>December 21-January 5</i>	Christmas holidays
<i>January 16</i>	Final examinations begin
<i>January 20</i>	Inauguration Day holiday
<i>January 25</i>	End of Fall Semester
<i>February 5</i>	Spring Semester classes begin
<i>February 21-22</i>	Washington's Birthday holiday
<i>February 24</i>	University Founder's Day
<i>April 2-8</i>	Spring vacation
<i>May 30</i>	Memorial Day holiday
<i>June 8</i>	Fifty-fifth annual Commencement
<i>June 23</i>	Summer Session classes begin
<i>August 29</i>	Summer Session classes end

CONTENTS

page

11	University History and Organization
12	Cultural Opportunities
13	Services
16	Student Activities
17	Fees
17, 38	Financial Aid
18	University Regulations
23	Undergraduate Studies
31	Graduate Studies
43	Special Programs
45	Summer Session
46	Course Numbering System
49	College of Arts and Sciences
248	School of Business Administration
315	Center for Technology and Administration
331	School of Government and Public Administration
377	School of International Service
411	College of Continuing Education
427	Lucy Webb Hayes School of Nursing
436	Index



Some of the uptown facilities are:

McKinley Building—This domed structure houses classrooms, departmental offices and the campus store.

Battelle-Tompkins Library—With a capacity of 300,000 volumes, the library includes a faculty-graduate reading room, 24-hour study room, typing, Xerox and rare book rooms and a periodical reading room.

Hurst Hall—The oldest building on campus is used for classrooms and science laboratories. Glover Room, the scene of many campus activities, is located here.

Watkins Art Building—The first wing of the proposed Creative Arts Center houses studios, lecture rooms and the Watkins Art Gallery.

Communication Building—Home of the campus radio station also has studios for classes in broadcasting and television.

Mary Graydon Center—The social hub of the campus houses student offices, lounges, recreational facilities and the cafeteria and snack bar.

Asbury Administration Building—Admissions office, other administrative offices, and various faculties are located here.

Letts-Anderson Hall—Women's Dormitory.

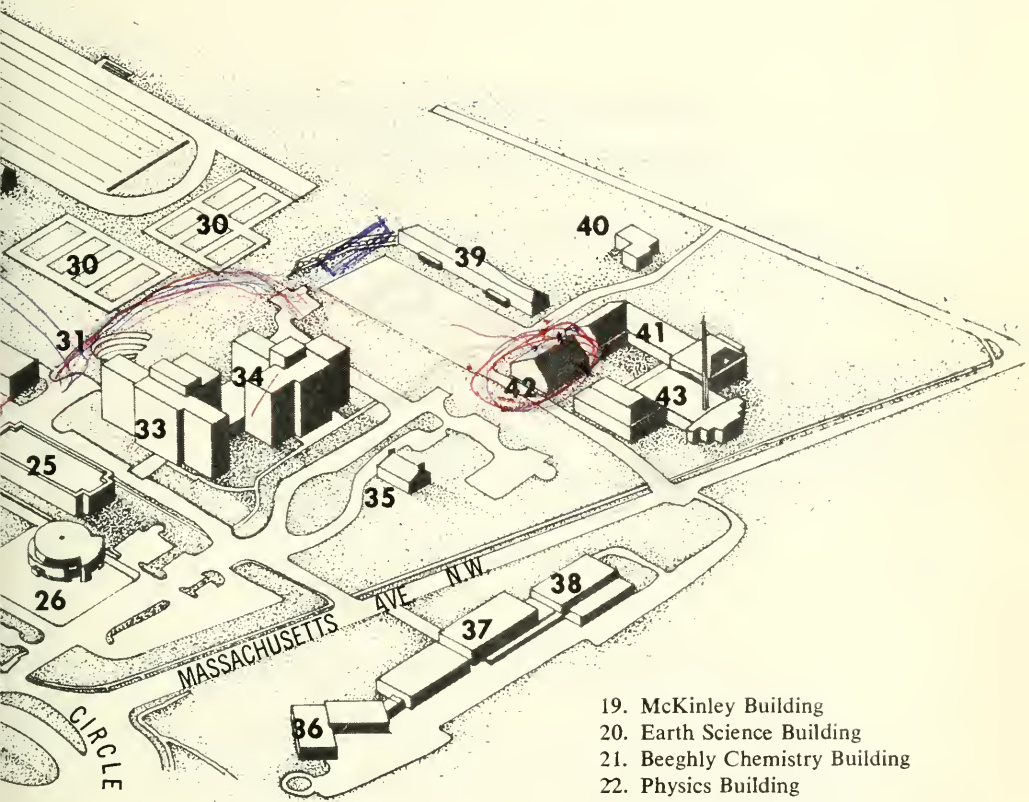
Hughes-McDowell Hall—Men's Dormitory.

Leonard Center—Men's Gymnasium, bowling lanes, swimming pool, billiard room, and mail room are located here.

Clendenen—Home of the campus theatre and women's physical education department.

THE AMERICAN UNIVERSITY

Uptown Campus



LEGEND

1. Watkins Art Building
2. Kreeger Music Building
4. Hamilton Building
5. $\Phi\Sigma K$
6. $\Lambda\Sigma\Phi$
7. $\Phi E\Pi$
8. A T O
9. Communications Building
10. Letts Hall
11. Anderson Hall
12. McCabe Hall
13. Clark Hall
14. Gray Hall
15. Roper Hall
16. Metropolitan Memorial Church
17. School of International Service
18. Hurst Hall
19. McKinley Building
20. Earth Science Building
21. Beeghly Chemistry Building
22. Physics Building
23. Mary Graydon Center
24. Battelle-Tompkins Library
25. John Sherman Myers Law Building
Hutchins Building (Rear Entrance)
26. Kay Spiritual Life Center
27. Green House
28. Asbury Administration Building
29. Osborn Building
30. Tennis Courts
31. Woods Brown Outdoor Theatre
32. Clendenen Gymnasium
33. Hughes Hall
34. McDowell Hall
35. President's Administration Building
36. Leonard Annex
37. Leonard Gymnasium
38. Leonard Swimming Pool
39. Dormitory—Seminary
40. President's House—Seminary
41. Classroom Building—Seminary
42. Library—Seminary
43. Administration Building—Seminary

ADMINISTRATIVE OFFICERS OF THE UNIVERSITY

President George H. Williams, J.D.

Provost Harold H. Hutson, Ph.D., LL.D., L.H.D.

Secretary Donald Derby, Ph.D.

*Vice President for
Student Affairs* Bernard A. Hodinko, Ed.D.

*Vice President: Treasurer
and Business Manager* William O. Nicholls, M.B.A.

Honorary Chancellor Hurst R. Anderson, L.H.D., LL.D., Litt. D.

CORRESPONDENCE DIRECTORY

Admission Director, Office of Admissions, Asbury Building

Housing Resident Halls Business Management Office, McDowell Hall

Scholarships and Loans Director, Office of Student Aid, Mary Graydon Center

Part-time Employment Director, Placement Office, Mary Graydon Center

Counseling Director, Counseling Center, Mary Graydon Center

Program Information Office of the Dean of the Respective College or School

Records and Transcripts Registrar, Asbury Building

Foreign Student Adviser Foreign Student Adviser, Mary Graydon Center

Financial Transactions Office of Student Accounts, Leonard Center

*To complete above
addresses, write:* The American University,
Massachusetts and Nebraska Avenues, N.W.
Washington, D.C. 20016

For additional information, phone, write, or visit:

Office of the Director of Admissions
THE AMERICAN UNIVERSITY
Massachusetts and Nebraska Avenues, N.W.
Washington, D.C. 20016 Telephone: (202) 244-6800

THE CORPORATION

Established by Act of Congress of the United States, February 24, 1893

Members of the Board of Trustees

CHARLES C. PARLIN, *Chairman*

BISHOP JOHN WESLEY LORD, *Vice Chairman*

MASTIN G. WHITE, *Secretary*

HONORARY

General Dwight D. Eisenhower

The Honorable Harry S Truman

Mr. George C. Clarke

Dr. John O. Gross

Dr. Robert M. Lester

The Honorable E. Barrett Prettyman

Mr. Samuel H. Kauffmann

Mr. John M. Reeves

Dr. Ralph D. Smith

Miss Bertha Adkins

Dr. Lyle W. Ashby *

Mr. Harold I. Baynton *

Mrs. Walter H. Beech

Mr. Donald S. Bittinger *

Dr. Eugene Carson Blake

Mr. Francis H. Boland

Mr. Howard Booher

Mr. Earl Bunting

Mr. Renah F. Camalier

Mr. Joseph P. Carlo **

Dr. Horace E. Cromer

Dr. William F. Dunkle, Jr.

Mr. W. Yule Fisher **

Dr. Arthur S. Flemming **

Bishop Paul N. Garber

Mr. Raymond I. Geraldson

Mr. Charles C. Glover, III

Bishop Fred G. Holloway

The Reverend W. Kenneth Hoover **

The Honorable B. Everett Jordan

Mr. Otto E. Koegel

Mr. David Lloyd Kreeger

Mr. John L. Laskey

Dr. Edward G. Latch

Mr. William T. Leith **

Bishop John Wesley Lord

Bishop Paul E. Martin

Dr. Raymond W. Miller

Mr. Bradshaw Mintener

General George Olmsted, U.S.A.R.

(Ret.)

Mr. Charles C. Parlin

Mr. J. Craig Peacock

Mrs. Helena D. Reed *

Mr. Roland Rice *

Dr. Albert P. Shirkey

Dr. Guy E. Snavelly

The Honorable John J. Sparkman

Bishop Prince A. Taylor, Jr.

Mr. Dan Terrell **

Dr. Norman L. Trott

Mr. Davis Weir

Dr. Mastin G. White

Dr. Myron Wicke

* Alumnus of The American University

** Elected by the Alumni Association

THE UNIVERSITY

HISTORY AND ORGANIZATION

History THE AMERICAN UNIVERSITY was founded by Methodist Bishop John Fletcher Hurst and chartered by Congress in 1893. Bishop Hurst chose the nation's capital as the setting for a new Protestant institution devoted specifically to graduate study and personally selected the 75-acre tract in northwest Washington. The University was officially dedicated in 1914, and in 1916 the first degrees were awarded.

In 1925 the need for undergraduate liberal arts education was recognized with the establishment of the College of Liberal Arts now the College of Arts and Sciences. Other schools added to the University, in chronological order, are: Washington College of Law, 1949; School of Business Administration, 1955; School of Government and Public Administration, 1957; School of International Service, 1958; College of Continuing Education, 1964 and Lucy Webb Hayes School of Nursing, 1965. The Washington College of Law publishes a separate catalog.

The University has retained its close relationship to The Methodist Church and is known today as a "national Methodist university." In 1956 a portion of the University campus was deeded to Wesley Theological Seminary. The addition of a School of Nursing was the outgrowth of the bond between the University and nearby Sibley Memorial Hospital, another Methodist-related institution. The National Methodist Church, Metropolitan Memorial, is located across Nebraska Avenue from the campus and is the scene of many University functions.

Enrollment The student body of the University normally is composed of students from all 50 states and approximately 80 foreign countries. In the 1967-68 academic year, full-time undergraduates numbered 4,313. A total of 3,213 enrolled for full-time and part-time graduate study and more than 7,000 students attended on a part-time basis either on the campus or at various metropolitan Washington and military off-campus locations.

Accreditation The American University is accredited by the Middle States Association of Colleges and Secondary Schools and the University Senate

of The Methodist Church. It is a member of the Association of American Colleges, the Association of Urban Universities, the Association of University Evening Colleges, the National Intercollegiate Athletic Association, and is approved by the American Association of University Women. A charter member of the Council of Graduate Schools in the United States, the University is also a member of the Midwest Conference on Graduate Study and Research.

The School of Business Administration is a member of the Middle Atlantic Association of Colleges of Business Administration. The Washington College of Law is a member of the Association of American Law Schools and is approved by the American Bar Association. The Department of Education in the College of Arts and Sciences is a member of the American Association of Colleges for Teacher Education and is also accredited by the National Council for Accreditation of Teacher Education in both elementary and secondary areas. The Department of Music in the College of Arts and Sciences is a full member of the National Association of Schools of Music. The Department of Chemistry, College of Arts and Sciences, is accredited by The American Chemical Society. Wesley Theological Seminary is accredited by the American Association of Theological Schools and the University Senate of The Methodist Church.

CULTURAL OPPORTUNITIES

Location Students at The American University have a unique opportunity to enrich their educational experience because the University is located in the nation's capital. The Library of Congress, the National Archives, and some 250 special libraries are found here. Some of these, such as the Folger Shakespeare Library, are world famous. To the scientist, the National Bureau of Standards, the National Institutes of Health and the Geological Survey are of special interest. The embassies and consulates contribute rare sources of information and experience to the student. Museums and art galleries, the theater, concerts and religious centers enhance the humanities program. Learned societies, governmental agencies, business associations, and professional groups whose headquarters are in the metropolitan area, offer still other rewards to the student who comes to Washington.

University Facilities The campus of The American University is located in northwest Washington at Ward Circle just beyond Embassy Row. Most of the University facilities are on this 66-acre campus:

THE LIBRARY. Surely Washington, D.C., may fairly be considered the bibliographic center of the world. Dominated by the Library of Congress, the two-hundred-fifty-odd libraries in the city give unparalleled support to the Consortium of the five local universities. Although the smallest of the five, the Library of American University is nonetheless the fastest growing: its collection will have doubled in three years to reach 300,000 cataloged volumes by 1969, and it will shortly reach an annual growth rate of 30,000 items. Some two thousand periodicals are currently received. The high caliber of the collection is all the more

remarkable because of the present small size of the University Library: included are the Peace Society Library, excellent in pre- and post-World War I materials, including those from the League of Nations; the Artemas Martin collection of rare materials on mathematics, many items unique; the Friedrich (economics) and the Franklin (pre- and post-Hitler Germany) collections; finally, a small but fine group of European diplomatic papers. The University Library's main catalog includes the holdings of the Wesley Theological Seminary Library and of the Washington College of Law Library. The resources of the Consortium Libraries are regularly used by participating students. Students are directed as required to the many specialized libraries freely available in the area.

ABRAHAM S. KAY SPIRITUAL LIFE CENTER. This unusual circular edifice is the University's center of interfaith religious activity. In addition to an auditorium, the Kay Center contains offices for chaplains of various denominations.

CREATIVE ARTS CENTER. The Watkins Art Building opened in 1962 as the first wing of the Arts Center and houses studios, lecture rooms and graphic arts workshop. The Kreeger Music Building contains teaching studios, classrooms, practice rooms, faculty offices and a recital hall. The final unit of the Center ultimately will house the Speech Arts Department and new theater to replace the University's present Clendenen Theater which, together with the Woods-Brown Amphitheatre, provide indoor and outdoor stages for campus productions and convocations.

COMMUNICATION BUILDING. This is the home of campus radio stations WAMU and WAMU-FM and contains studios for classes in broadcasting and television. The AM station is heard only on campus but WAMU-FM reaches an audience within a 50-mile radius of Washington. Television programs can be taped in the TV studio for transmission over Washington channels.

MARY GRAYDON CENTER. Long a campus landmark, this recently remodeled building is the social hub of the campus as well as the seat of student government. Student Association offices and student publications occupy more than half of one floor. Here also are lounges, reading rooms, recreational facilities for commuting students, the cafeteria, snack bar and private dining rooms which are available for use by student organizations and the faculty.

LEONARD STUDENT CENTER. Most of the University's recreational facilities, which are available to all full-time students, are housed in Leonard Student Center. Here students may enjoy billiards, bowling, sauna baths, swimming and use of the gymnasium. The outdoor recreational facilities include tennis courts.

SERVICES

Counseling Programs The University Counseling Center provides professional service to guide students in choosing vocational and educational objectives and in overcoming study problems and problems of personal and social adjustment. A full range of testing services is provided together with an occupational library and a developmental reading service.

Under the direction of the Associate Dean of the College of Arts and Sciences, freshman students are assigned in small numbers to faculty members for guidance in their academic programs. They remain with these advisers until they have decided upon a major area of study at which time they are assigned to advisers in their specialized fields.

Counseling programs are also administered by the Dean of Students and the Deans of Men and Women who, through an assigned staff of Resident Advisers in the dormitories, direct social and cultural activities and assist students in their adjustment to college life.

The Chaplains are all available for counseling concerning religious, moral, or other personal problems. The University Chaplain is a specialist in personal and marriage counseling.

Placement Center The Placement Center provides assistance to students in career placement and also assists students in obtaining part-time and summer employment. Whenever possible, part-time positions are arranged to provide the student with practical experience which will be useful in developing career plans.

Foreign Student Program Each year the University enrolls approximately six hundred foreign nationals in its academic programs. These students are assured a successful and well integrated experience through the guidance of the Foreign Student Adviser who is responsible for their general welfare and counseling. He represents the students in all matters relating to University policy, assists in personal adjustment problems, United States Immigration requirements, passport and visa extensions, and community relationships.

Residence Facilities Dormitories for undergraduate men and women are located on the campus. There are no accommodations for married couples or for graduate students. Women are housed on the campus in Letts Hall, Andersor Hall, and Hughes Hall. Men students reside in McDowell Hall and Leonard Hall on the campus. Room rates vary with the type and location of the accommodations. A complete list can be found in the semesterly Bulletin: *Schedule of Classes*.

For students considering living on campus, applications for dormitory rooms should be addressed to the Manager, Residence Halls Business Manager, and must be accompanied by a room deposit fee of \$100. The deposit will be held over from semester to semester as long as the student continues to reside in University housing. Upon application after graduation, or the fulfillment of all University housing contract or approved withdrawal from University housing, the \$100 will be refunded less any unpaid obligations.

Students in residence in dormitories must observe all University regulations and will be held responsible for any damage done to room during their period of occupancy. The cost of repairs for unnecessary damage to community property may be assessed on a pro-rated basis to all residents of a dormitory in cases where there is obvious international responsibility not assumed by an individual.

Each room in University dormitories is equipped with a bed, chest-desk, and chair, and there is ample closet space. Electrical equipment brought by the students must be limited to small appliances such as clocks and radios.

In each dormitory there are coin-operated washers and dryers for the convenience of students. Maids clean all rooms once a week, and students are expected to maintain their own rooms at other times. There are no housekeeping facilities in the residence halls, and cooking is not permitted.

Students who cannot be assigned to University dormitories because of limited space may make their own arrangements for housing in the vicinity of the University if their parents approve.

Worship Services Each week during Fall and Spring Semester [except academic holidays] worship services are held at the Kay Spiritual Life Center on the following schedule:

Sunday: Episcopal Communion [9:00 a.m.], Roman Catholic Mass [9:45 a.m. and 12:30 p.m.], and Protestant Worship [11:00 a.m.].

Thursday: Christian Science [time and place to be announced].

Friday: Jewish Sabbath Services [7:00 p.m.].

In addition, Roman Catholic Mass is celebrated daily at 12:15 and confessions are heard daily 11:30-12 and Thursdays 4-5 p.m.

Food Service The University operates a cafeteria and snack bar for student dining. Optional meal contracts are available for breakfast, lunch and dinner in the cafeteria on a five-day or seven-day per week basis.

Health Services The Student Health Service is available to all full-time undergraduate students. This service is for diagnostic purposes and the care of minor illnesses only; the infirmary has no facilities for bed patients. Students whose health problems are more complex will be referred to nearby Sibley Memorial Hospital or another hospital of their choice for treatment.

Full-time undergraduate students must submit with their application for admission a report (on a form available from the Admissions Office) of the results of a physical examination by a physician.

Student Insurance Plan All full-time students may elect to participate in the Student Accident and Sickness Insurance Plan at the time of registration. Detailed information concerning this plan is available in the Office of Student Personnel.

Mail Service The University maintains a U.S. Post Office contract station on the campus where students may rent boxes for a small fee. Mail boxes are furnished resident students in each dormitory without charge.

Office of Student Accounts Following admission to the University, students handle all financial transactions with the University, including the cashing of checks, through the Office of Student Accounts.

Linen Rental A linen rental service is available for \$30 per year. Arrangements for this service can be made when students arrive at the University.

Campus Store The Campus Bookstore carries all required textbooks, a large selection of non-required books, all necessary paper supplies and stationery, college sportswear, college jewelry and gifts, phonograph records, magazines and newspapers, film and toiletry items.

STUDENT ACTIVITIES

Student Government The Student Association, an organization of all full-time undergraduates enrolled in all of the schools and colleges of the University, coordinates functions of campus groups and social life. The legislative and policy-forming functions of the Student Association are performed by the Student Senate. This group is composed of officers and representatives elected by the student body.

Dramatics The American University Players present several classic and contemporary productions throughout the year and also schedule play readings, one-act plays, and dramatic television productions. Through work in various phases of campus theatre, points may be acquired to meet the requirements of active membership in the Green Room Players Club.

Music Musical groups on campus include The American University Chorale, The American University Orchestra, and The American University Singers. Each of these groups presents concerts during the year. The Singers schedule concert tours in addition to their campus programs. Qualified students may register in any of these musical organizations for one credit hour per semester.

Religious Organizations Organized religious groups at the University are: the Baptist Student Union, the Canterbury Association, the Christian Science Organization, the Fellowship of Young Churchmen, Hillel, the Lutheran Student Association, the Methodist Student Movement, the Newman Association, the Unitarian-Universalists Group, and the Westminster Fellowship.

Professional and Honorary Societies One of the most satisfying achievements for any student is to be recognized by election to an honorary or professional society. At The American University students can strive for such recognition in the fields of biology, debate, dramatics, education, German language, graduate work, history, journalism, leadership, marketing, mathematics, music, political science, psychology, real estate, social science, speech arts, and transportation. Honoraries for campus leadership are Omicron Delta Kappa (men), Cap and Gown (women) and Tassels (women). There is also a chapter of the National University Honor Society, Phi Kappa Phi, on campus.

Service Organizations There are two service organizations whose University chapters are nationally affiliated. Alpha Phi Omega, for college men, provides a wide fellowship program with many leadership and service opportunities. The women's service sorority, Gamma Sigma Sigma, performs a variety of services for the University and community, including assistance in the Settlement Houses in the Washington area.

Publications Students publish a semi-weekly newspaper, the *Eagle*; a literary-humor magazine, *The American*; and a yearbook, the *Talon*. The student radio stations WAMU-AM and WAMU-FM broadcast daily.

Social Organizations The University currently has chapters of twelve nationally affiliated sororities and fraternities. The six sororities on campus are: Alpha Chi Omega, Alpha Epsilon Phi, Delta Gamma, Kappa Delta, Phi Mu, and Phi Sigma Sigma. The six campus fraternities include: Alpha Tau Omega, Alpha Sigma Phi, Phi Epsilon Pi, Phi Sigma Kappa, Tau Epsilon Phi, and Zeta Beta Tau. The governing councils of Greek life are the Panhellenic Council for the sororities, and the Inter-Fraternity Council for the fraternities.

Athletic Program The University participates in an intercollegiate athletic program that includes soccer, cross country, wrestling, basketball, swimming, tennis, golf, baseball, crew and track. There is intramural competition in touch football, basketball, softball, track, swimming, bowling, and volley ball. In addition, individual competition is available in tennis, checkers, golf, horseshoes, chess, badminton, table tennis, free throw shooting and archery.

FEES

Average expenses for a full-time undergraduate for a year (1968-1969)			
are:	Tuition		\$1,800
	Room	480 to	530
	Board	430 to	550
	Total		\$2,710 to 2,880
	Graduate Students		\$60 a credit hour
	Part-time Students		\$60 a credit hour

Charges for room and board vary according to room occupancy and number of meals per week. Expenses do not include clothing, books, travel, entertainment and personal expenses. These vary according to the needs of the individual. Incidental expenses and special fees are itemized in each session *Schedule of Classes Bulletin*. Full-time non-degree students pay the same tuition rate as full-time undergraduates. Payment of fees is due at the time of registration. A deferred payment plan is available. Books and other classroom expenses amount to approximately \$150-\$200 extra.

Refunds Pro-rated refunds of tuition will be allowed during the first six weeks of each fall and spring semesters and only if the student processes an official withdrawal form available from the Offices of the Registrar or academic deans. Requests for pro-rated refunds of meal tickets must be made separately through the Office of Student Personnel. Refund schedules are published in each session *Schedule of Classes Bulletin*.

FINANCIAL AID

Financial aid is available in many forms—scholarships, fellowships, assistantships, remission of tuition, student loans and salaries and wages for ships, remission of tuition, student loans and salaries and wages for those who have part-time employment.

Scholarships, Fellowships and Assistantships Students needing financial assistance should write to or consult with the Director of Student Aid for specific information. Special brochures related to financial assistance are available upon request.

The University offers more than 50 undergraduate scholarships each year ranging in value from \$200 to \$1,800. In order to qualify for consideration a student must have a "B" average, rank in the top quarter of his class, have above-average College Entrance Examination Board scores and present evidence of financial need. Applicants for scholarships must also file a *Parent's Confidential Statement* with the College Scholarship

Service, Box 176, Princeton, New Jersey. Forms are available at local high schools or upon request to The College Scholarship Service. Applications for scholarships should be submitted to the Director of Admissions and should include:

1) a formal application; 2) an autobiographical sketch including basis for need; and 3) two letters of recommendation.

A limited number of University-wide awards are available for graduate study. Supplementing these are specialized Assistantships and Fellowships restricted to a specific college or school of the University. Write the Fellowship Adviser, Office of Graduate Studies, for further information.

Loans There are various University loans ranging from small short-term emergency loans carrying no interest to long-term loans with interest. Application for these loans may be made after one semester. National Defense Education Act Loans are available to students beginning with their first semester.

Employment Many students also earn a portion of their college expenses through part-time employment on the campus or elsewhere in the Washington community. Inquiries about employment should be addressed to the Director of Placement.

UNIVERSITY REGULATIONS

Student Responsibility The University faculty has formally adopted the following statement on student responsibility:

The American University expects that each student, as a mature member of the academic community, will adhere to the highest standards of personal integrity and good taste in his conduct and in his relationships with others.

The maintenance of such standards is a condition of continued enrollment as a student of the University, and any individual whose attitude or behavior suggests that he is not constructively committed to them may be dismissed from the University even though his record may be otherwise satisfactory.

University Liability Faculty, students, staff and guests are responsible for their personal property, clothing and possessions. The University does not carry any insurance to cover losses of such articles nor does it assume any responsibility whatever therefor.

Registration Registration is conducted on the dates specified on the academic calendar published in the *Schedule of Classes Bulletin*. In order to register for courses a student must:

- 1) be admitted to the University or be approved for enrollment for non-degree study;
- 2) have an American University permanent I.D. card or, in the case of new students, have a Social Security number;
- 3) secure approval of his program of study from his academic adviser;
- 4) complete the necessary registration forms and pay his tuition and fees, and
- 5) turn in all registration forms to registrar representatives.

More detailed information about registration will be found in the *Schedule of Classes Bulletin*.

Advanced Registration In some instances fulltime undergraduate degree students *previously enrolled* at the University are required to register and pay a deposit on their tuition well in advance of the first day of classes.

For further details regarding registration, consult the Office of the Registrar or the *Schedule of Classes Bulletin*.

Late Registration Late registration (subject to a \$10 fee) is permitted during the period provided on the academic calendar. No student will be allowed to register for credit after these dates.

Academic Load A full-time undergraduate student may register for 12 to 18 credit hours during the fall or spring sessions. Programs in excess of 18 credit hours must be approved by the appropriate Dean prior to registration. Any student employed more than 20 hours a week is encouraged to register as a part-time student and enroll for no more than 10 undergraduate credit hours per semester or for no more than 6 graduate credit hours per semester.

A graduate student may be considered fulltime when carrying 9-12 credit hours. The specific amount varies from one department or school to another. Consult the academic dean or department chairman in order to ascertain fulltime status.

Information regarding the academic load regulations during the summer session can be found in the summer *Schedule of Classes Bulletin*.

Auditors A student who wishes to attend a class but who does not wish to participate, take examinations, receive a final grade, or receive credit for the course may register as an auditor. Tuition and fees for auditors are the same as those for credit registered students.

Changes in Registration Requests for changes in registration must be made on a form provided for this purpose by the Office of the Registrar. Changes in registration include withdrawals from courses, adding or dropping courses, changing sections, and changing from credit to audit or audit to credit.

Withdrawals A student may withdraw from a course from the beginning of a semester until the end of the tenth week of classes without a signature of instructor or adviser. From the beginning of the eleventh week of classes, a course withdrawal will be allowed only with the written approval of the dean of his school or the dean's designate. Consultation with and approval of the instructor may be required. A course withdrawal will be indicated by the single grade "W". It is to be understood that no grade of W can be given in any session after the last class meeting for that session.

A student who is withdrawing completely from the University must secure the signature of his Dean on the "Course Registration Change" form and then file this form in the Office of the Registrar. Students who cease to attend classes but do not file an official withdrawal with the Office of the Registrar may be given final grades of "F." Discontinuation of attendance at class or notification to the instructor does not constitute an official withdrawal.

Refunds or cancellations of tuition are pro-rated and are calculated from the date the "Course Registration Change" form is filed in the

Office of the Registrar *and* in the Office of Student Accounts. Requests for cancellation of room charges and meal tickets must be processed through the Residence Halls Business Management Office and will be subject to standard University regulations.

Students who discontinue class attendance but who do not officially withdraw during the cancellation period will be responsible for payment of the full amount of the applicable tuition and fees.

Adds Courses may be added through the second week of classes of a semester. From the beginning of the third week of classes, no course adds will be allowed.

Non-Degree Students If a student does not wish to pursue a degree program but desires to register for particular courses for which he has the necessary qualifications, he may be considered for admission to the College of Continuing Education as a non-degree student. He receives full academic credit for courses taken (unless he registers as an auditor, in which case he is not responsible for attendance or examinations and does not receive a grade or academic credit).

A non-degree student who establishes his eligibility for admission to full standing may use a limited number of credits earned as a non-degree student to meet the requirements for a degree at The American University if they are in courses appropriate to the degree sought. Non-degree students seeking admission as undergraduate degree students may do so for the fall session only and must submit the formal application for degree admission prior to August 1.

For additional information refer to the College of Continuing Education section of this *Catalog*.

Veterans' Information All students planning to attend The American University under the provisions of a veterans' education program must submit an application to the Veterans' Administration well in advance of their registration date. The proper authorization must then be presented at the time of registration. Veterans receiving education benefits should be prepared to pay all expenses inasmuch as tuition payments are made directly to the veterans by the Veterans' Administration. Veterans who are unable to pay tuition in full at the time of registration may secure a partial deferment. (For more detailed information about the deferred payment plan consult the *Schedule of Classes Bulletin*). All veterans are advised to anticipate a delay of approximately two months before receiving their first payment. Veterans are provided further economic guidance by the Veterans' Counselor in the Office of Student Accounts.

Foreign Students Foreign students, whether applying for admission as degree or as non-degree students, must have official transcripts sent directly from all secondary schools and/or colleges attended and must also provide evidence that they are able to use the English language with sufficient facility to pursue academic work successfully in an English-speaking institution. The University may also require that they take additional tests to establish their eligibility for the academic programs and courses in which they wish to enroll. Foreign students should be certain that they have adequate funds before they come to the United States for study.

United States Department of Justice Immigration and Naturalization Service regulations governing non-immigrant "F-1" visa foreign students require foreign students in this category to pursue a full course of study while maintaining non-immigrant student status.

In compliance with the provisions under which this institution has been classified as a training agency for foreign students, The American University requires all non-immigrant "F-1" students to pursue a full course of study each semester during the period of their enrollment.

Under this regulation an undergraduate will be required to register for 12 credit hours of course work and a graduate student will be required to register for 9 credit hours of course work. Any modification of this requirement which results in a course load below these minimum requirements must be authorized by the Foreign Student Adviser in consultation with the Admissions Officer and the academic adviser.

Students who fail to observe the above requirements will be ineligible to receive a "Certificate of Eligibility" (Form I-20) and all other letters of certification in support of their continuation in non-immigrant "F-1" student status.

The transfer of foreign students from one Private Exchange Visitors' Program to that of the Private Exchange Visitors' Program of The American University must be authorized by the Foreign Student Adviser prior to admission or registration in any course or program at this University.

All foreign students are required to register in the Office of the Foreign Student Adviser at the beginning of each semester in order to insure their compliance with these requirements.

Questions concerning U.S. Immigration and Naturalization Service regulations should be directed to the Foreign Student Adviser.

Motor Vehicles Freshman, sophomore and junior students who reside on the campus are not allowed to bring motor vehicles which require licensing to The American University. Seniors and non-resident students who are allowed to bring motor vehicles to the campus must register them at the Office of Student Accounts, display a valid parking permit and observe the University's parking and speed limit regulations.

Grading System Grade definitions used are: "A" (3 points), excellent; "B" (2 points), good; "C" (1 point), average; "D" (0 points), poor; "F" (minus 1 point), failure; "S" satisfactory; "U" unsatisfactory; "I" incomplete; "W" official withdrawal. No credit is granted for the grade of "D" received by a graduate student in a graduate level course. The grade of "I" (incomplete) is given only to students who have made arrangements in advance with their instructor for the late completion of requirements in a course. A grade of "I" must be resolved to an "A," "B," "C," "D," or "F" by the instructor upon the completion or the failure to complete the requirements of the course within the time allowed. A grade of "W" may not be given by the instructor to remove a grade of "I."

When courses are repeated by students other than freshmen, the grades achieved in both attempts stand separately on the record and are used in the mathematical determination of the average. Only one attempt of a given course, however, may be counted toward fulfillment of graduation requirements.

Only grades earned at The American University are computed in the cumulative index. Credits accepted on transfer from other institutions are included in the total number of credit hours applicable to degree requirements but are not included in the cumulative index.

**Freshman
Forgiveness Rule**

Since the Fall semester, 1963, a freshman student who, during the first two semesters of full-time study, receives a grade of "F" in a course may repeat the course within the calendar year thereafter or in the next two regular semesters in which the student is registered at The American University. No grade shall be removed from the record but when such a course is repeated only the grade earned the second time the course is taken shall be used in computation of the cumulative average for purposes of making decisions concerning probation, dismissal and required average for graduation.

A part-time freshman student who during his first twenty-four hours of study receives grades of "F" in courses may repeat these courses within the calendar year after the semester in which the grades of "F" were received with resulting cumulative index benefits stated above.

Students who are readmitted to the University before they have begun their third semester of college work, may within one calendar year after their re-admission, retake courses in which they received grades of "F" during their first two semesters at American University with the resulting cumulative index benefits stated above.

The foregoing regulations concerning repeated courses are not applicable to students who enter the University as transfer students, including those who enter as transfer students with freshman status (less than 30 hours).

Pass-Fail System

An undergraduate degree student will be permitted to take on a Pass-Fail basis, four courses (each course may be for 3 or 4 credits) over his entire undergraduate program (not more than one course in a single fall or spring session) outside his major courses, his required related field courses, and his University requirements courses. Grades for these courses will be recorded as satisfactory or unsatisfactory and will not affect the student's grade point index. Details of pass-fail course registrations are available from academic deans.

Absences

The University expects class attendance of all students. Absences must be justified to the instructors with the understanding that it is the responsibility of the student, if he is excused, to make up whatever work has been missed.

**Reading, Research
and Independent
Study Courses**

A reading course may be defined as an independent study course not offered during the semester or summer session the student requires it and which is administered to him by a member of the faculty at other than formal class-meeting times.

A research course may be defined as an independent study course other than thesis or dissertation requiring research into a relevant topic of special interest to the degree student, one which is not normally offered through the available courses within the University and/or Joint Consortium. Registration in such a research course is subject to the academic and administrative approval of the student's dean or department chairman. Forms for application to take reading courses are avail-

able from the Office of the Registrar, as well as forms for research courses.

A grade for a research or reading course is awarded to the student at the end of the semester or session within the normal grading system of the University discussed previously herein, and is subject to those special conditions established by the student's academic dean or department chairman.

The student is expected to enroll for such Reading or Research courses during the normal registration or advanced registration.

Enrollment in Reading and Research courses is limited to students who have been admitted to and are working on a degree program at this University. Non-degree and Consortium students from other universities are ineligible.

UNDERGRADUATE READING AND RESEARCH COURSES. An undergraduate student who wishes to enroll in these courses must be recommended by his major department, must have pursued the background courses essential to the successful pursuit of the proposed project, and must have completed 60 semester hours of college work, at least six of them in this University, with a cumulative academic index of 1.5 or better. Properly qualified undergraduate students may earn a maximum of 12 credit hours by independent study. Registrations will be accepted only during regular registration periods. Each course must be completed within a single session.

GRADUATE READING AND RESEARCH COURSES. A Master's or Doctoral degree student recommended by his department is eligible to register for a reading course subject to the conditions established by his department, school or college. See the section on this subject under Graduate Studies.

REGISTRATION FOR READING AND RESEARCH COURSES. Students permitted to enroll in the independent study courses listed below should enter on their registration cards the indicator number (1-81) of the department which will supervise their work, followed by the number of the particular course to which they are being admitted, as indicated below.

Undergraduate Courses

- .390-91 Individual Study Project (3 each)
- .490-91 Individual Research Project (3 each)
- .398-99 Departmental Honors (3 each)—Juniors
- .498-99 Departmental Honors (3 each)—Seniors

Graduate Courses

- .099 Graduate Study (no credit)
Required of graduate students who are not enrolled in course work.
- .590 Reading Project (3)
- .690 Research Project (3)

Transcripts A student may obtain a transcript of his academic record from the Office of the Registrar. Any student may order one transcript free of charge; there is a nominal fee thereafter.

The University will not issue a transcript which reflects only a part of a student's record, nor will it make copies of transcripts on file from other colleges and universities.

Consortium of Universities In cooperation with Catholic University, Georgetown University, George Washington University and Howard University, The American University offers its qualified undergraduate and graduate degree students the opportunity to enroll for courses at these other universities. Such courses must be limited to those which are not offered by or which may not be immediately available at The American University. Credit earned in this program will be considered as residence credit.

Freshmen and sophomores are limited to *only* foreign language courses not offered at The American University.

To be eligible for this program, students must: (1) be fully admitted degree students, (2) be actively enrolled, (3) be in good academic standing, (4) be approved by the Registrar, and (5) be approved by their Dean or Department Chairman who is responsible for securing approval at the cooperating university.

Forms to be used for this program are available in the Registrar's Office. Students must follow the registration procedures and pay the tuition rate of this University. Auditors are not permitted.

The program is available for Fall, Spring and Summer Sessions.

Completion of Degree Requirements and Commencement The University confers degrees and issues diplomas at the end of the Fall Semester, the Spring Semester, and the Second Summer Session. All students who expect to complete their degree requirements by the end of one of these periods must file an "Application for Degree" available from the Office of the Registrar. The application deadline is subject to the dates established by the Registrar and published in the *Schedule of Classes Bulletin*.

A formal Commencement ceremony is held only at the end of the Spring Semester. Diplomas are mailed to students completing degrees at the end of Fall or Summer sessions unless the student requests in writing to the Registrar that the diploma be held for the annual Commencement ceremony at which the student expects to attend.

A student who, having applied for a degree for a given semester, fails to meet the requirements of the degree for that semester, *must re-apply for the degree* expected at a later date.

Grade Reports Grades will be mailed to students as soon as possible after the end of the semester, usually within two weeks following the final examination period. Grade information will not be released by telephone or in person by the Office of the Registrar.

UNDERGRADUATE STUDIES Admission

The minimum requirements for admission consideration are listed in the following paragraphs. For other additional admission requirements, a student should consult the section of this Catalog concerning the School or College which he wishes to enter after reading the following.

Summer school applicants follow a different procedure than that which is described below. Such students who do not plan to take a degree program at The American University and wish to enroll for summer courses for possible transfer to the home institution should

consult that section of this Catalog labeled "Summer Sessions" on page 45.

Undergraduate Degree Majors

The University offers the following Associate and Bachelor's degree programs:

COLLEGE OF ARTS AND SCIENCES

Associate in Arts in general studies; Bachelor of Science in biology, chemistry, distributed sciences, medical technology, and physics; Bachelor of Arts in anthropology, art, broadcasting, economics, elementary education, English, French, German, health, physical education and recreation, history, journalism, mathematics, music, philosophy, philosophy and religion, political science, psychology, public relations, religion, Russian, Spanish, speech arts, sociology, and statistics.

SCHOOL OF BUSINESS ADMINISTRATION

Associate in Business Administration; Bachelor of Science in Business Administration in general business, accounting, automatic data processing systems, finance, industrial relations, personnel and manpower management, international business, marketing, production (industrial) management, real estate, statistics, transportation, logistics and traffic management, and pre-law.

SCHOOL OF GOVERNMENT AND PUBLIC ADMINISTRATION

Bachelor of Arts in political science.

SCHOOL OF INTERNATIONAL SERVICE

Bachelor of Arts in international studies, and languages and area studies.

SCHOOL OF NURSING

Bachelor of Arts in nursing.

COLLEGE OF CONTINUING EDUCATION

Associate in General Studies; Associate in Law Enforcement; Bachelor of Science in General Studies in social science, business administration, and police administration; and the Bachelor of Science in Law Enforcement.

Freshman Admission

A graduate of an approved secondary school who has completed 16 acceptable units (at least 15 of which must be academic or college preparatory in nature including 4 units in English and 2 units in mathematics) with a minimum grade average of "C" or its numerical equivalent, who ranks in the upper half of the graduating class, and who achieves acceptable scores on the Scholastic Aptitude Tests of the College Entrance Examination Board, will be considered for freshman standing.

In addition to completing the forms supplied by the Office of Admissions, each applicant is required to submit a non-refundable \$15 application fee, an official secondary school transcript, and the official results of the Scholastic Aptitude Test and English and Mathematics Achievement Tests of the College Entrance Examination Board. Those applying for admission to the College of Arts and Sciences or to the School of International Service and who have completed two or more years of a foreign language in the secondary school program must also submit foreign language achievement test results as well. These credentials must be filed by March 1 for the fall and summer sessions, and December 1 for the spring session.

For complete instructions on admission procedure please request "A Guide for Filing Application for Undergraduate Admission."

Transfer Admission Undergraduate students, applying for transfer to The American University, may normally expect to receive credit for appropriate courses taken at a regionally accredited collegiate institution and completed with a grade of C or better. No more than 60 credit hours of course work completed in a college transfer program at a two-year college may be accepted. Credits for courses taken in certain specified institutions not regionally accredited and which are completed with a grade of B or better may be accepted as transfer credit in individual cases up to a total of 60 credit hours. A maximum of 30 credit hours may be accepted on transfer from a combination of relevant work completed satisfactorily in a service school course recommended for baccalaureate credit by the American Council of Education, or for relevant college-level correspondence or extension courses completed through USAFI or through a regionally accredited institution which accepts the credits for its own degrees. Applications must be submitted by July 1 for the fall semester, December 1 for the spring semester and May 1 for the summer session, unless specified otherwise in the various programs.

Early Admission In addition to the general standards and procedures pertaining to all undergraduate applications, the University offers a special opportunity for early admission. The University welcomes early requests from students whose superior ability, academic achievement, and general maturity are such that after three years of high school they can expect to perform reasonably well on the college level. Many colleges and universities have accepted with excellent results carefully screened applicants who qualify in this way. This process is sometimes called admission without diploma but usually is identified as *early admission*. The Director of Admissions of The American University is happy to receive inquiries from high school principals or counselors or directly from prospective students about early admission criteria and procedures. Each case is considered on its own merits. The following factors, however, are important to evaluation:

1. The high school record with special reference to grades and the pattern of courses taken.
2. Performance on the College Entrance Examination Board Tests.
3. The recommendation of the high school principal and counselors.
4. An interview with the applicant by the Director of Admissions and the Dean of the College, or Associate Dean of the College.

Occasionally additional tests of ability, social maturity or interest may be required.

Advanced Placement and Advanced Standing The University encourages entering students to participate in the College Level Examination Program and the Advanced Placement Program of the College Entrance Examination Board. Entering freshmen may arrange to take the College Level Examination Tests at national examination centers throughout the calendar year. (For information write to The College Entrance Examination Board, Box 977, Princeton, New Jersey 08540, for College Level Examination Program—*Bulletin of Information for Candidates*.)

On the basis of such examinations, qualified students may be granted as many as 30 undergraduate credits in English composition, history, social sciences, humanities, mathematics and natural sciences, which are applicable to the total number of hours required for graduation.

An increasing number of secondary schools participate in the Advanced Placement Program of the College Entrance Examination Board which permits students to take college level courses in some basic academic field as part of the twelfth-grade program. The American University considers the examination results of participating students for purposes of granting advanced standing credit and/or advanced placement.

Waiver On the basis of tests and records the University may permit students to waive all or part of the undergraduate University Requirements in Composition and Reading, and on occasion will recognize individual competency by waiving requirements in the humanities, social sciences and natural sciences.

Students are entitled to waive 1 unit of physical education for each 15 hours transferred or for each 6 months of active military service. Students over the age of 30, part-time students and students with appropriate medical excuses may also waive the physical education requirement.

Waiver examinations in physical education and foreign languages are given at the University during the course of the school year.

Students accepted with 60 hours of advanced standing by transfer may waive six (6) hours of the University Requirements. Those students with 90 hours of advanced standing by transfer may waive 12 hours of University Requirements. However, no student may graduate without at least six (6) hours in each of the three major divisions: social sciences, natural sciences, and the humanities.

When students transfer courses which are essentially "continuation courses" the grade earned in the final semester of such courses will determine whether the entire sequence is creditable for University requirements purposes only. (This regulation shall not be interpreted as granting credit hours for courses transferred with a grade below "B" or "C" according to the institution from which the courses are transferred.)

Re-Admission An undergraduate student whose study at the University is interrupted for any reason for a period of one semester or more (excluding the summer sessions) must apply for re-admission at least two months prior to registration. If such re-admission is approved, he returns subject to the academic requirements and regulations in effect at the time of re-admission.

Class Standing The class to which a student belongs is determined at the end of each academic year on the basis of the number of semester hours he has successfully completed, including those accepted as transfer credit, as follows:

0-29	Freshman	60-89	Junior
30-59	Sophomore	90-120	Senior

Declaration of Undergraduate Major Each undergraduate is required no later than the completion of 60 credit hours of course work to make a formal declaration of his major

field of study on a form available from the Deans' or departmental offices. The application must be approved by the Dean or Department Chairman and filed in the Office of the Registrar.

Changes in Major and in College or School An undergraduate student who wishes to change from one college or school to another or one major to another must receive the permission of the Dean and/or Department Chairman in charge of the program to which he wishes to transfer. This must be done on forms available from the Deans' Offices or departmental offices and filed in the Registrar's Office. A change in college, school or major affiliation, when approved, does not become effective until the beginning of the next session. It does not become effective if the student becomes subject to suspension or dismissal for failure to maintain University minimum standards.

Foreign Language Course Regulation It is necessary to complete successfully the second session of a beginning or intermediate foreign language course to receive academic credit for the first session of the same course. This includes beginning and intermediate intensive language courses. The grade in the first session of the course will be included in the academic average whether the second semester is successfully completed or not.

Undergraduate Students Enrolled for Graduate Credit A senior student with the permission of his department chairman or Dean may enroll in specifically approved graduate courses not required for his undergraduate program. Such courses must be designated as graduate credit at the time the student registers for them. Retroactive application of these credits for such purpose is not permitted. Credits for these courses may be applied toward meeting the course requirements for a graduate degree after the student has been awarded his undergraduate degree and provided he is then admitted to graduate standing.

Transfer Credit Students who take courses in other college and universities for transfer credit to The American University must receive prior approval from their advisers and the Dean of their college. This work usually is undertaken during the summer in an institution near the student's home or as a part of an overseas study program (junior year abroad). Credit may be denied if the student does not receive prior permission.

Graduation Requirements A minimum of 120 semester hours, excluding physical education requirements, with an overall average of 1.00 (C) in all course work taken at The American University is required for any bachelor's degree. The minimum acceptable grade for courses used to fulfill requirements of the undergraduate major is C. Course credit in the major field for which the grade of D is received may be used only as elective credit if it has not been repeated to meet the requirements of the major. At least 30 credit hours must be taken in residence. Additional requirements are listed in the section pertaining to each school and department.

For an Associate degree, a minimum of 60 hours, excluding physical education, is required. The grade average and residence requirements are the same as those for a bachelor's degree. Not all departments and schools offer the Associate degree. Consult the appropriate sections of this catalog for details on specific degrees.

Graduation Honors Undergraduate students are eligible to graduate with honors provided they have completed at least one-half of the credit hours of work required for their degree in residence at The American University and have achieved the requisite grade average. The average is based on courses taken at the University only. Undergraduate honors and the average required are as follows: *summa cum laude*—2.9 or higher; *magna cum laude*—2.75 to 2.89; *cum laude*—2.50 to 2.749.

Bachelor's Degree Requirements The program required of the undergraduate student at The American University may be divided in five components. These are:

UNIVERSITY REQUIREMENTS. A pattern of courses required of all students regardless of school or major.

COLLEGE OR SCHOOL REQUIREMENTS. Additional requirements of the college or the school in which the student is registered.

MAJOR REQUIREMENTS. Courses required by the school or department of the student's major interest.

RELATED STUDIES AND TOOL COURSES. Courses related to the major which are required by the major school or department.

ELECTIVES. Courses of the student's own choice to complete the required minimum of 120 academic credit hours for graduation.

University Requirements Program The University Requirements Program constitutes a pattern of courses required of all undergraduate students who earn either the Associate or the Bachelor's degree from The American University, regardless of their school or major. The distribution requirements concern general education in the liberal arts and are intended to involve the student in the broad areas of humanities, natural and social sciences.

Approximately one-third of the academic hours required for the bachelor's degree constitute the University Requirements courses. This program offers flexibility in the undergraduate curriculum and promotes a distribution of study in areas outside of a student's major interest, along with selected courses closely related to his major. If a student is unsure at the beginning of his undergraduate career as to his major objective, he may delay his declaration of major until he completes his University Requirements program. In fact, many advisers and departments do encourage students to complete this program before the beginning of their senior year.

However, a student need not necessarily concentrate his University Requirements courses in his first two years. He may begin course-work in his major as early as his first semester. In either case, a careful and comprehensive academic plan should be formulated in order to avoid problems of scheduling and credit-hour deficits.

The regulations set forth below supersede all previous regulations concerning University Requirements. Students who were enrolled and have had continuous participation in degree programs of the University prior to the effective date of these regulations (which is September 1965) may follow the regulations in force at the time of their admission, or they may elect the new regulations with the concurrence of their academic advisors. No student may follow parts of both plans but must select either one or the other.

The Committee on University Requirements may modify the University Requirements program from time to time in an effort to make the University more relevant to the student's world. Accordingly, the student is recommended to check closely with his adviser regarding any revisions to the program and to ascertain their effect, if any, upon himself.

Candidates for any associate or bachelor's degree to be conferred by the University must include the following course requirements in their academic program unless otherwise relieved from such requirements by advanced placement, advanced standing or waiver. (See page 26. Advanced Placement and Advanced Standing for further details.)

I BASIC STUDIES (10 hours)

Composition and Reading (Normally taken in the freshman year.) (6 hours)

Physical Education (4 one-semester units, no credit, normally completed by the end of the junior year.)

II HUMANITIES (12 hours)

(Courses numbered below 500)

Art (Excluding studio or design courses.)

English (Excluding Composition and Reading and Advanced Composition.)

History (Excluding Historiography and Senior Seminar; total history credits may be counted in either humanities or social sciences, but not both.)

Languages and Linguistics (Excluding elementary and intermediate languages.)

Music (Excluding private lessons and performance courses.)

Philosophy and Religion

Speech Arts (Excluding practicum and performance courses.)

III NATURAL SCIENCES (12 hours)

(Courses numbered below 500)

Biology

Chemistry

Earth Sciences

Mathematics (Excluding all courses in statistics.)

Physics

IV SOCIAL SCIENCES (12 hours)

(Courses numbered below 500)

Anthropology

Economics

History (Excluding Historiography and Senior Seminar; total history credits may be counted in either humanities or social sciences, but not both.)

Sociology

Psychology (Excluding Experimental Psychology.)

Political Science

Explanatory note: Any course numbered below 500 which is acceptable for purposes of the College of Arts and Sciences Political Science major may be used as social science credit for University Requirements by any student in

any school or major. Courses in Political Science are offered in the School of Government and Public Administration and the School of International Service.

Honors Courses Honors courses fulfill University requirements in the discipline in which they are taught. Honors courses are courses so designated by the Honors Board of the College of Arts and Sciences or by agreement between the schools teaching such courses and the Committee on University Requirements.

A student who enrolls in courses not covered by the force of these regulations and who seeks credit toward meeting University requirements may petition for permission through the chairman of the department or the dean of the school in which the course is taught and with the consent of his adviser, to the Committee on University Requirements.

Probation and Dismissal An undergraduate student who fails to maintain a cumulative average of "C" (1.00) is subject to dismissal. A first-year undergraduate student whose cumulative average falls below "C" may, under certain circumstances be continued on probation during a second year. In the determination of the number of hours completed, credits accepted by transfer from another institution are included, but in the determination of the cumulative average, only grades earned at The American University are counted.

Residence Requirements The last 30 credit hours of course work for any degree must be completed in residence. An undergraduate student who transfers from another institution with advanced standing in the field of the major is required to do a minimum of 12 credit hours of upper-level course work in the department of the college or school for which he has applied for graduation. More may be required by the department chairman or dean.

Courses of Study Programs and courses of study offered by each School and College, as well as specific undergraduate degree requirements, are shown elsewhere in this *Catalog*. For course descriptions and program requirements, the separate sections of the *Catalog* should be consulted.

GRADUATE STUDIES

Graduate Education in Washington At this point of this century the urgency of offering more and better graduate education to all who can use it needs no justification beyond the obvious. Neither is it necessary to spell out in detail to students in each academic field covered in this *Catalog* the extra value added by carrying on this work in the Nation's Capital.

Simply put, Washington is a city of exciting persons, places, ideas, and events.

The University has enjoyed gratifying success in meeting the challenge of service at the highest academic level and in training men and women not only for academic life but for outstanding positions in national affairs. Its reputation rests firmly on the strength of its faculty, on a program developed to take advantage of the research facilities of the capital city, and on a student body drawn from leading universities in the United States and foreign countries.

In the classroom the graduate student at the University meets the members of a distinguished faculty and leading experts from government, education, business, etc. They deal, as thinkers and as practitioners, with the complex problems of modern society and they introduce the student to the latest developments in their fields. There can be a personal relationship with an unusual group of fellow students, many of whom hold positions of real responsibility in government and several other fields in this country and abroad. Through the faculty, the cooperating officials (many of whom are themselves part-time faculty members), and his fellows, a student can study and observe, for example, the institutions and forces that shape and execute the domestic and foreign policies of the nation.

Research may be conducted under the joint auspices of the University and one of the many agencies or institutions in Washington which through the years have cooperated effectively with the University, making available their rich stores of documentation and their highly advanced methods. Facilities of the other institutions of higher education in the Washington area provide an even greater educational center.

Degree Programs

Graduate programs in the University are offered in the areas listed below. This summary is brief and merely notes the fields in which the Master's and Doctor's degrees are given. More detailed and specific information concerning the particular offerings and degree requirements are given in sections of the *Catalog* concerning the College of Arts and Sciences and the various Schools. Most departments have developed a brochure that describes in considerable detail their offerings so that the prospective graduate student will find it helpful to make direct contact with the department of his area of interest before applying for admission.

Master's Degree The University offers the following Master's degree programs:

THE COLLEGE OF ARTS AND SCIENCES offers programs leading to the Master of Arts degree in anthropology, art, broadcasting, church music, economics, education (including physical education), English, French, German, history, journalism, linguistics, mathematics, music, music education, philosophy, psychology, public relations religion, Russian, sociology, Spanish, speech arts and statistics. The College has programs leading to the Master of Science degree in biology, chemistry, and physics; to the Master of Education degree; to the Master of Science in Science Teaching; and to the Master of Fine Art.

THE SCHOOL OF BUSINESS ADMINISTRATION offers programs leading to the degree of Master of Business Administration.

THE SCHOOL OF GOVERNMENT AND PUBLIC ADMINISTRATION offers programs leading to the degrees of: Master of Arts in Government, Public Administration, and Public Administration: Technology of Management; Master of Public Administration; and Master of Public Administration in Urban Affairs, and in Technology of Management.

THE SCHOOL OF INTERNATIONAL SERVICE offers programs leading to the degree of Master of Arts in international studies and Master of Inter-

national Service. It also administers the program leading to the degree of Master of Arts in Languages and Area Studies.

COLLEGE OF CONTINUING EDUCATION offers a program leading to a Master of Science in Teaching and Master of Science in Correctional Administration.

Doctoral Degree The University offers programs leading to the Doctor of Philosophy degree in the following fields: business administration, business administration: technology of management, chemistry, economics, education, government, history, international studies, mathematics, philosophy, physics, psychology, public administration, public administration: technology of management, sociology, and statistics. The Doctor of Education degree is also offered.

The requirements for these degrees are stated in the various College and School sections of this catalog. Any School, College or Department, however, is entitled to increase the requirements listed in this section. Each student should read carefully the section of this catalog of the School or the College in which his major interest lies before definite study plans are made.

In no field is the doctoral degree earned by merely a set amount of work; it is awarded only upon the achievement of a high degree of scholarly qualifications as judged by appropriate members of the faculty.

Area Studies Program Candidates for the Master's degree may pursue programs in Area Studies under the guidance of particular Schools or Departments of the University. Graduate degrees allowing for a very considerable area emphasis are offered in business administration, economics, government, history, international relations and sociology.

The Master's Degree in Language and Area Studies as such is offered by the School of International Service in the following areas: Russia and East Europe, Latin America, West Europe, Far East, and Southeast Asia Areas. In addition the School administers the joint languages and area studies program in Western European studies as well as the above areas. See those pages for program descriptions and requirements.

Interdepartmental Science Program The Master of Science in Science Teaching is administered under the joint supervision of the Division of Natural Sciences and Mathematics and the Department of Education. See the section on the College of Arts and Sciences.

Interdisciplinary Study Graduate work divided among Colleges, Schools and Departments does not necessarily mean compartmentalized study. Most Schools and Departments permit an "outside" field as one of the comprehensive examinations for the doctorate, and some require this interdisciplinary breadth.

There is ample room in the normal curriculum for course work in other Schools and Departments at the doctoral level. In some areas of study, such as Public Administration and Business Administration, or International Relations and Comparative Government, the exposure to course work in more than one School is apt to be necessary for an understanding of the main area—in the first example as between the School of Government and Public Administration and the School of

Business Administration, and in the second example as between the School of International Service and the School of Government and Public Administration. In other cases the student may wish to go far afield or to transfer a few credits from another field taken in another institution.

A student working toward a doctorate or master's degree may take courses in the Wesley Theological Seminary and apply certain of them toward the requirements for the degree.

Consortium of Universities In cooperation with Catholic University, Georgetown University, George Washington University and Howard University, The American University offers its qualified undergraduate and graduate degree students the opportunity to enroll for courses at these other universities. Such courses must be limited to those which are not offered by or which may not be immediately available at The American University. Credit earned in this program will be considered residence credit.

To be eligible for this program, students must: (1) be fully admitted degree students, (2) be actively enrolled, (3) be in good academic standing, (4) be approved by the Registrar, and (5) be approved by their Dean or Department Chairman who is responsible for securing approval at the cooperating university.

Forms to be used for this program are available in the Registrar's Office. Students must follow the registration procedures and pay the tuition rate of this University. Auditors are not permitted.

The program is available for the fall, spring and summer sessions.

Courses of Study Programs and courses of study offered by each School and the College, as well as specific graduate requirements, are shown elsewhere in this *Catalog*. For *course descriptions* and program requirements, the separate sections of the *Catalog* should be consulted.

In addition to the normal lecture-discussion courses and seminars, the program of graduate study provides opportunities for individual research projects (including case studies and in-service projects), professional institutes, and increased opportunity for reading courses.

AN INDIVIDUAL RESEARCH PROJECT (apart from thesis, case study or dissertation) may be elected by a student for credit toward a graduate degree. A proposal for an individual research project must be made by the student, through any instructor, to his Dean or Department Chairman. Approval of these projects is granted, each project separately, by the Dean or Department chairman concerned.

Individual research projects must be completed within the time specified by the student's Dean or Department Chairman. The Dean, after reviewing the work submitted, may allow as much as six hours credit for the project, although a student is not permitted to register for more than three hours credit at the outset. If the additional three hours are approved, the student is required formally to add the hours and to pay the tuition charges.

AN IN-SERVICE PROJECT is an individual research project undertaken by a student working in a government, educational, business, or other selected organization concerning some aspect of its operation. The project is supervised jointly by a member of the faculty and an official

of the organization. The in-service project must be approved in advance by the Dean concerned, is offered initially for three hours of credit, and must be completed within the time specified by the student's Dean or Department Chairman. The Dean reviews the work submitted and may allow as much as six hours of credit for any one project.

A PROFESSIONAL INSTITUTE is a specialized and intensive academic offering of the University designed primarily for persons engaged in professional fields. A student may earn credit toward an advanced degree in an institute which is approved for graduate credit only when the election is approved by the appropriate Dean or Department Chairman, when the student meets the prerequisites for registration in that institute, and when he enrolls according to its regulations. Institutes are listed in the *Schedule of Classes Bulletin*.

A READING COURSE is an offering which the student may, under special circumstances, pursue on an individual basis with an appropriate number of tutorial conferences. In order to be eligible to register for either a scheduled or an unscheduled reading course, a graduate student must be working toward a degree. In addition, approval of an *unscheduled* reading course is granted only if it seems to be justified as part of the student's educational program, if no course covering the subject is available, and if it is a course that the University could realistically be expected to offer. The respective Dean passes upon all unscheduled reading courses in his School or College, and approval must be secured before registration, on special forms provided for the purpose. The student is expected to (1) master material at least equivalent to that covered in a comparable course of the lecture-discussion type, (2) attend a minimum of four scheduled tutorial conferences, and (3) pass tests on the material assigned, including an end-of-course written examination.

EITHER FULL-TIME OR PART-TIME STUDY is available, the latter for those who work full-time at their vocations. Employment opportunities in Washington are excellent, and emphasis is placed increasingly on advanced education by the Federal Government and other employers. The University facilitates the education of part-time students by offering evening classes convenient to some of the major centers of government employment. Most evening classes meet once a week.

DEGREE OR NON-DEGREE work is available. If a student does not wish to pursue a degree program but desires to register for particular courses for which he has the necessary qualifications, he may apply to the College of Continuing Education as a *non-degree student*. He then receives full academic credit for courses taken (unless he registers as an auditor, in which case he does not receive a grade or academic credit). If a student enrolled in CCE later wishes to enter a degree program he may be considered for admission provided he has maintained a "B" average in graduate level work in CCE. He may transfer not more than 12 acceptable graduate credits earned in non-degree status toward a graduate degree program. However, all graduate level work will be included in computing a student's academic average.

Changes in Degree Programs

Changing from one Department or School to another requires admission to the Department or School to which transfer is desired and involves an evaluation of the courses previously taken in relation to the new degree

objective. A student requesting such a transfer should reapply to the Office of Admissions, giving his reasons for the request. The transfer must be approved by the Dean or Chairman of the School or Department to which transfer is requested and need not be approved by the Dean or Chairman of the student's former School or Department.

In addition to the general requirements stated in earlier pages, a student must satisfy any further requirements of the School or Department to which he wishes to transfer. Deficiencies are usually remedied by successfully completing certain additional undergraduate or graduate courses which the student must take soon after, if not before, being allowed to transfer.

A student who has been admitted to the University on a *non-degree* basis should take special care to apply early for admission toward a degree if he wishes to pursue a degree program.

Financial Assistance For Graduate Students

The University offers financial assistance to graduate students in the form of fellowships, scholarships, traineeships and assistantships. Competition for these awards is keen and award is made on the basis of academic record and promise.

In most cases, a single application is used for all awards offered. This application must be sent (with all supporting materials, including application for admission) to the appropriate office by February 1 for awards to begin the following September.

All awards require full-time graduate study (9-12 hours per semester).

For a brochure on financial awards and an application, please write to the Office of Admissions or to the Fellowships Adviser, Graduate Studies Office.

GRADUATE DEGREE

Admission

Minimum Standards for Admission

The minimum requirements for consideration of admission to graduate study at the University are possession of a bachelor's degree earned at an accredited college or university and maintenance of at least a 1.5 cumulative grade point average (based on a three-point system) in the undergraduate program. This average for graduate admission is based on the cumulative grade point index in all work completed at the institution where the degree has been or will be earned, provided that at least 60 credit hours of work has been completed there at the time of the evaluation. Or, if credit has been earned at other institutions which the student has attended, the evaluation of the grade point average is made in all work completed at all institutions provided it is at least 60 hours.

The student is expected to have maintained a cumulative grade point average of at least 2.0 in each institution at which graduate work has been attempted with the understanding that in applying for graduate study he may be admitted without reference to his undergraduate average if (1) he has maintained either a 2.3 cumulative grade point aver-

age in a master's program completed at an accredited institution, or (2) if he has maintained a 2.5 cumulative grade point average in 12 or more credit hours of a master's degree program still in progress at such an institution at the time of the evaluation of his application.

Furthermore, individual departments or schools may require satisfaction of other criteria or requirements for admission to graduate study which are in addition to, and not in lieu of, the University's minimum requirements stated above.

Summer Applicants for summer sessions (who do not plan to pursue a degree at this University) should consult the section in this catalog "SUMMER SESSIONS" for separate application instructions.

Entrance Examinations Various Schools and Departments within the University require separate examinations such as the "Graduate Record Examination" or the "Admission Test for Graduate Study in Business" for admission. Other supporting documents such as letters of recommendation or evidence of professional experience may also be required for admission.

A student must clear his admission status before he registers for courses. Students who have not heard from the University regarding their admission status should inquire directly to the Office of Graduate Admissions before attempting registration.

In addition to the general requirements stated above, any further admission requirements may be found in the section of this catalog pertaining to the individual school or department.

Provisional Standing Each school or department within the University may admit to provisional standing a limited number of students who do not fully meet the minimum standards described above. A student in this category will be designated as provisional at the time he is admitted and registered. Admission to this category may be subject to other regulations of the University not contained herein. Students seeking admission in this category should consult the academic administrators of their specific programs for details.

If, however, a student is admitted provisionally to the University, he must demonstrate to the satisfaction of his college, school, or department by the end of his first full session of fulltime study or by his first 12 credit hours of part-time study that he does have the ability to pursue his degree program with a reasonable promise of success.

Previous study in graduate courses at the University may be utilized in determining an applicant's eligibility for provisional admission. Continuation in his graduate program will be permitted upon the professoriate's favorable appraisal of the student's performance after he has been granted provisional admission.

The provisional admission status of a graduate student who does *not* give satisfactory evidence of his capabilities (as stated above) will be cancelled.

Admission Procedures Admission to study for the master's degree is a separate step from admission to study for either the bachelor's degree or the doctoral degree.

An applicant for admission to a graduate degree program must submit a completed application form no later than June 1 for Fall admission and October 1 for Spring admission unless an earlier date is

otherwise specified by the individual Schools or Departments in this catalog. In support of this application, the student must ask each college or university in which he is enrolled or has attended to send an official transcript of his record to the *Office of Graduate Admissions* of this University.

Evaluation of Graduate Students The minimum cumulative grade point average required to maintain good standing in graduate study at The American University at both master's and doctoral levels is 2.0 (based on a 3.0 system) in all graduate courses attempted here and at the Consortium of Universities.

Advancement to Candidacy Each dean or department chairman may at his option require a formal advancement to candidacy and determine the nature of the advancement procedure it will use. Advancement to candidacy may be described as a point in the student's academic progress during which his professoriate formally evaluates his abilities for continuation in his degree program. His professoriate may also administer to him qualifying examinations in order to determine this more effectively.

Course Hour and Residence Requirements **MASTER'S DEGREE.** At least 30 credit hours of graduate work, including a research requirement of six credit hours, is necessary for the completion of the Master of Arts and Master of Science degrees; 24 of these, including the research requirement, must be completed *in residence* at The American University.

DOCTORAL DEGREE. For students who complete their entire graduate program at this University, the requirement is the equivalent of 72 credit hours of graduate work, part of which may consist of 48 to 66 credit hours of course work, and part of which may be 6 to 24 hours of either directed study on the dissertation or the non-credit dissertation seminar, depending on the candidate's individual department or school requirements.

For students admitted with a master's degree earned elsewhere, the requirement is at least 30 hours of graduate work in residence and at least 12 hours of directed study on the dissertation or of non-credit dissertation seminar, exclusive of any work taken at this University prior to application to the doctoral program.

Each doctoral candidate admitted without a master's degree must complete a minimum of 30 credit hours of graduate work *in residence* at The American University and a minimum of 6 to 12 hours of directed study on the dissertation or on the non-credit dissertation seminar depending upon his individual department or school requirements and after he has been admitted to doctoral standing.

Once a student has been admitted to graduate work toward a degree he must obtain *prior* permission from his dean or department chairman in order to take graduate work at another institution which will count toward his degree objective at this University. Otherwise, such work will not be counted toward a degree at this University. Such work also may conflict with residence requirements.

Transfer Credit Credit may be considered for transfer at the time of admission, provided the admission is not provisional, or at advancement to candidacy, or other specific time established by the teaching unit.

Tools of Research Each dean or department chairman specifies the tool or tools or research required, if any. (See the individual school or department pages of this *Catalog* for the tools that are required.) Tools relate to research in the discipline in which the student is studying. The student's satisfaction of tool requirements is certified by the teaching unit, which may subcontract the job or do it itself. Normally, such tool or research requirements are satisfied before the student undertakes the comprehensive examinations and before he attempts the thesis, dissertation, or related studies.

Examination Requirements **MASTER'S DEGREE.** At least one written examination, the nature and scope of which is determined by the student's teaching unit, is required. A final oral examination may be required at the option of the teaching unit. The student should consult his dean or department responsible to ascertain if it is required in his discipline.

Written examinations for master's degrees are designed to test mastery of a field of specialization. They presuppose more reading and research in the field than would normally be expected in a regular lecture-discussion course series. Such examinations are expected to show not only knowledge of the subject and appropriate professional literature but also an ability to express intelligently comprehensive concepts and fundamental issues.

DOCTORAL DEGREE. Four comprehensive examinations are required. At least two must be written and must be taken within one year after completion of residence requirements. The nature and scope of the remaining two examinations, as well as the chronology of their administration, is left to the discretion of the individual school or department in which the student is registered.

The required written examination for a master's degree administered at this University may be utilized as a qualification examination and may be substituted for one doctoral examination.

Comprehensive and other examinations (both oral and written) for doctoral candidates are designed to test mastery of both broad and specialized fields. They presuppose more reading and research in the fields than would normally be expected in a series of lecture-discussion courses. They are expected to evoke not only knowledge of the subject and appropriate professional literature but also to express intelligently comprehensive concepts and fundamental issues.

Examination Timetable For both master's and doctoral degree students, their dean or department chairman (or designated representative) determines the time and eligibility for taking the examinations.

The Graduate Studies Office administers comprehensive examinations for graduate candidates three times a year as a service to the University academic community. Examinations are normally administered to both master's and doctoral candidates once each fall, spring and summer, with some exceptions. When administered by the Graduate Studies Office, all of a candidate's examinations must be taken as a unit. See the University Calendar in the *Schedule of Classes* for application dates.

However, a teaching unit may administer its own comprehensive examinations at times other than those indicated in the Calendar. Students who wish to be included in this latter category should consult their teaching unit directly.

All applicants for comprehensive examinations, whether administered by the teaching unit or by the Graduate Studies Office, must use the application form provided for the purpose, have it approved by their dean or department chairman, and pay the appropriate fee in the Office of Student Accounts, all before any applicable deadlines.

When application is made for Graduate Studies administration of the examinations, the candidate must take care to submit the form no later than the deadline announced in each semester's *Schedule of Classes* Bulletin.

When candidates applying for the examinations for administration by their teaching unit, prior approval must be secured, as well as the meeting of any other requirements thereto.

Examination Fields Although proposed fields for comprehensive examinations may have been planned early in the graduate student's academic career, it is possible to change the fields up until the time the student actually submits the application for admission to the comprehensive examinations. Each school or department offers its current list of standard comprehensive examination fields, including certain "core" fields and areas in which candidates in particular degree programs must present themselves for examination. (A list of these fields is presented in the respective sections of this catalog.) A student may choose from the list (including the required core) the ones which are appropriate to his own interests and objectives.

In some disciplines, it is possible to choose a field outside the major area of interest. In choosing such a field, however, the candidate is required to choose one which is available at the time of his application to the comprehensive examinations.

Examination Grading Normally, each comprehensive examination written by a candidate is read by two readers and is rated Distinction, Satisfactory, or Unsatisfactory by each reader. In order to pass the examinations the candidate must obtain at least Satisfactory from both readers in each of the fields in which he was examined. In the event of a disagreement in the ratings between readers as to whether or not the candidate should pass, a third reader is appointed to break the deadlock. Also, the candidate may normally receive no more than two single ratings in separate fields of Unsatisfactory (three if doctoral) in order to pass. Therefore, all readers of any one candidate must report grades before any meaningful "pass" or "fail" of the candidate can be ascertained.

Examination Grading Variations However, each individual dean or department chairman may elect to determine a different system of grading comprehensive examinations for his own candidates. Consult the specific school or department of your major interest to ascertain what system is used. The system described above is the traditional one in use throughout most of the University.

Re-examination In the event that a candidate for a graduate degree fails part or all of his examinations (whether qualifying or comprehensive) he may be permitted a second attempt within two years. The nature and extent of the examination or examinations to be retaken is determined by his professoriate. However, no more than one retake is allowed.

Thesis and Non-Thesis Options For master's candidates the thesis is expected to demonstrate the student's capacity to carry on original and independent research. Some schools and departments of the University offer the opportunity to substitute a case study, an in-service project, an original creative work, or specific advanced research courses, for a thesis for the master's degree. In every such case, the thesis seminar or other accepted alternative must be considered part of the residence requirement for the master's degree and must meet the standards set forth by the individual schools and departments as well as those of the University.

No academic credit is given for the master's thesis unless the student registers for the Thesis Seminar. However, he should not enroll for this seminar before he is ready to start work on his formal thesis proposal or the thesis itself.

Traditionally, an advisory committee is appointed for each candidate working on a thesis. The committee may be composed of one, two, or three members. An oral examination by this committee is often required. Suggestions for revision may be made as conditions to be met before members will sign the title page of the thesis. If the chairman of the thesis committee or the department chairman certifies failure to complete a satisfactory thesis, the student may be dismissed from the University.

A student who writes a thesis must adhere to the required form and content for the proposal and to the other procedures described in detail in the published guides which may be received from the Dean's Office.

Dissertation Capping the requirements for achieving the doctorate is the dissertation, together with the required oral examination of the dissertation by the student's professoriate. Normally, the candidate must have completed all other academic requirements for the degree before the oral examination can be held.

When a candidate is declared ready to proceed to the dissertation he must submit a dissertation topic proposal reporting the results of his preliminary research. This proposal is expected to contain, among other things, a concise statement of the major problem of research and of related supporting problems, the data to be used, a selected bibliography, a statement of the probable value or importance of the study, a brief description of the methods to be used, and a preliminary outline of the dissertation in some detail.

After approval of the proposal by the candidate's adviser it is presented to the Dean of his School or College for final approval. Acceptance of the proposal indicates that the topic is a suitable one and that the dissertation will be accepted if developed adequately by the candidate. Acceptance of a dissertation topic proposal under no circumstances commits any Department or School or the University to acceptance of the dissertation itself, however. The University will take responsibility for directing research only in fields and problem areas which its faculty members feel competent to handle.

A Dissertation Advisory Committee of three to five persons is normally appointed by the candidate's academic Dean for each candidate undertaking a dissertation. After the draft manuscript has received the tentative approval of all members of the Committee, the Committee Chairman arranges for the oral examination. This covers the disserta-

tion itself and the general field in which it lies. All members must agree that the candidate has passed the oral examination. Conditions to be met before final acceptance of the dissertation may be specified without necessarily holding a second oral examination.

If the chairman of the dissertation committee or the department chairman certifies failure to complete a satisfactory dissertation, the student is automatically dismissed from the University.

Students must either register for 6-24 hours of dissertation seminar or pay the equivalent dissertation supervision fee. The credit hours available is determined by the teaching unit.

Publication It is the policy of the University to encourage publication of dissertations, case studies, and theses, with acknowledgment to the University. In the event substantial alterations are made before publication, this fact must be noted in the prefacing statement which gives acknowledgment.

Regulations concerning the form and preparation of the final manuscript, abstract, copyright, and so forth may be obtained from the Office of Graduate Studies or any other Dean or Department Chairman offering the doctorate. Certain deadline dates, *e.g.*, for submission of proposals, for submission of drafts, and for holding oral examinations, are found in each *Schedule of Classes Bulletin*, and must be met if a candidate expects to receive his degree at the following June Commencement.

The ABD Status Candidates for the doctorate who have completed all the requirements for that degree except the dissertation (the so-called "All-But-Dissertation" status) and who entered a doctoral program without a master's degree may be awarded the appropriate master's degree from the University in the field in which their doctoral work was accomplished.

Required Graduate Study Registration The University requires students who have been admitted to graduate degree programs to register each year for the entire academic year until they complete their entire program. Accordingly, those who do not enroll in any courses or research seminars during the school year must register in the fall semester of each year under the designation .099 Graduate Study (no credit) and pay the required fee (non-refundable). A subsequent spring or summer registration does not invalidate the necessity for registering in the fall semester.

A student in this category is entitled to use the library of the University as well as the other Consortium libraries and to consult with members of the faculty. A graduate student who does not so register, indicating his continued interest in completing his degree objective, may be subject to delay in his work or may be denied the right to continue his studies.

In the fall semester a student may register for his comprehensive examinations, if appropriate to his academic progress, in lieu of the required Graduate Study Registration, with the option of taking them at any approved designated time during the academic year. Forms are available for this purpose in the offices of the student's dean or department chairman. The appropriate fee is non-refundable. The signed receipt from the comprehensive examinations application will serve to validate his I.D. card in the Office of the Registrar in order that he may

use the library facilities. (See further details regarding the comprehensive examinations application under that section in preceding pages.)

Statute of Limitations MASTERS. All work for the master's degree must be completed within three years from the date of the first registration in a graduate degree program.

DOCTORATE. All work for the doctorate must be completed within five years from the date of the first registration as a doctoral student. However, the student is permitted seven years if he enters a doctoral program directly from a bachelor's degree.

A student who has not completed requirements in the time limits specified above must petition for re-admission if he wishes to continue.

Re-admission Continuation in the degree program may be granted once for a period of three years in the light of the requirements of the particular degree in effect at the time of re-admission, and may involve the taking of additional courses and/or other work in order for the candidate to remain "current" in his discipline. When a student is re-admitted under these circumstances, the length of time he will be allowed to complete his degree requirements and any additional courses, examination, or other requirements which are deemed necessary by the teaching unit, will be specified *at the time of re-admission*.

Any degree calling for additional prerequisite courses has the Statute of Limitations extended in the proportion that the prerequisite requirements bear to the graduate credit requirements.

Administration of Graduate Studies

Sumner O. Burhoe, Ph.D., *Dean of Graduate Studies and Director of Research*

Donald W. Bowman, M.B.A., *Assistant Director of Research*

Jack Reeder, M.A., *Administrative Assistant to the Dean of Graduate Studies*

Yvonne C. Polisky, *Assistant for Fellowships to the Dean of Graduate Studies*

Bee Lyons, *Secretary*

SPECIAL PROGRAMS

A variety of special programs add distinction to the intellectual and cultural climate of the campus. The brief description of each which follows can be supplemented by more detailed information available in the Office of Admissions.

Institutes An institute is a specialized and intensive academic offering of the University designed primarily for persons engaged in professional fields. Institute programs are developed in consultation with specialists in business organizations, government agencies, and national associations located in Washington and consist of formal lectures and seminar discussions, field and laboratory work, reading assignments and research projects. A partial listing of Institutes, Centers and special programs follows and other listings will be found under each College and School.

- Center for Liberal Studies** Associated with the College of Arts and Sciences, the Center sponsors an Artist-in-Residence from one of the liberal arts and also presents an annual spring forum when experts lecture at the University in sessions open to the Washington community.
- Washington Semester** Undergraduate honor students from 101 institutions throughout the United States come to The American University for one semester to study government in action through seminars, independent research, course work and field trips to government agencies. Many of the Washington Semester students return after graduation from their own colleges to pursue graduate work in areas opened to them through this program.
- Consortium of Universities** The American University is one of five institutions in Washington engaged in a program to coordinate the use of their respective graduate facilities. This program enables qualified students who are working toward a graduate degree to supplement courses available at their own universities with offerings at the other four.
- Special Lectures** Each year the Student Association and certain classes and clubs bring to the campus, as part of their regular programs, outstanding leaders in government and public administration for lectures and discussions with interested students. Senators, Representatives, staff members of Congress, administrative officers, political party officials and other public affairs leaders have met with students in recent years.
- The Department of Philosophy and Religion also sponsors guest lecturers who include outstanding spokesmen in the area of philosophy and religion. This department sponsors the annual "Faith and Freedom" lectures which bring distinguished scholars to the campus to discuss some aspect of man's spiritual heritage relative to its implication for the concept of freedom. Lectures on religion are also sponsored by the Chaplains and the Inter-Religious Club Council.
- Humanities Symposium** In recent years the Division of the Humanities has sponsored an annual Humanities Symposium. This symposium, which brings a panel of scholars to the campus to discuss an announced topic, is conducted in the spring by one of the departments in the area of the humanities and the fine arts.
- Off-Campus and In-Service Programs** The College of Continuing Education, which is designed to meet the educational needs of part-time students, administers a program of credit and non-credit courses at twenty centers in the Washington area and at certain Army and Air Force installations in the South. The College also operates a degree-granting branch at Fort Benning, Ga. Course offerings are selected from all schools and departments of the University except the Washington College of Law and the School of Nursing.
- Government Workshop Abroad** The School of Government and Public Administration sponsors a Comparative Government Workshop Abroad as a part of its summer program. Students may earn academic credit by participating in a field study of foreign governments.

Center for Research in Social Systems The Center represents an evolution in the University's means for the management of research and service programs for various government agencies and private foundations. It is made up of several component institutes designed to bring professional talent to bear upon specific social service research, development, study and service problems in international and public affairs. The activities of the Center supplement those of the schools and departments of the University in administering research conducted by members of the academic faculty.

SUMMER SESSION

The summer term includes two five-week sessions in succession and an eight or ten-week evening session, depending on the courses offered.

Summer Application Sessions are open to students of The American University, to non-degree students (see the separate section on that category), and to students currently enrolled at other institutions. Students enrolling in the University summer sessions are subject to the same general admission procedures as are those for non-degree students. Students currently enrolled at another institution should apply here by using application form available in the back of the Summer School Bulletin: *Schedule of Classes*. This form certifies that the student is in good academic standing at his home institution. Such completed forms and other correspondence should be sent directly to the Assistant Dean for Summer Sessions, College of Continuing Education, The American University, Washington, D. C. 20016. No further formal application is necessary for those who qualify to enter a summer session. Admission can be completed at registration and earlier arrival is not required.

Curriculum Course offerings are designed with several audiences in mind. Special emphasis is placed on graduate courses for those interested in professional advancement in the areas of education, business, and government. The summer *Schedule of Classes Bulletin* is available upon request.

Summer Housing and Facilities For information regarding housing and food services during the summer, students are advised to write to those offices directly (see the Correspondence Directory on page 8). Additional campus facilities available to summer students include a swimming pool, sauna bath, sports program, theatre, and musical events. All facilities on campus are air conditioned.

In addition to the facilities available at the University, students can take advantage of the easily accessible and varied attractions of the Nation's Capital. Information on transportation and on special summer events scheduled in the District of Columbia is available in the Summer Sessions Office.

Credit Hours

The University operates on the semester credit hour system. One credit hour is equivalent to one 50 minute class meeting or two clock hours of laboratory work a week for approximately 15 weeks, plus an examination meeting in the sixteenth week.

Course Numbering System

Each course is designated by a four or five digit number. The digits preceding the decimal (1.-81.) identify the department in which the course is taught as follows:

- | | |
|---|--|
| 1.—Honors courses
(non-departmental) | 44.—Applied Music |
| 3.—Anthropology | 45.—Hospital Training Program |
| 5., 7.—Art | 46.—Nursing |
| 9.—Biology | 47.—Philosophy and Religion |
| 10., 11., 12.—Business Administration | 49.—Health, Physical Education
and Recreation |
| 15.—Chemistry | 51.—Physics |
| 17.—Communication | 53., 54., 56.—Government and Public
Administration |
| 19.—Economics | 55.—Technology and Administration |
| 21.—Education | 57.—Psychology |
| 23.—English | 65.—Sociology |
| 27.—Earth Sciences | 67.—Speech Arts |
| 29.—History | 69.—Statistics (Courses listed under
Mathematics section.) |
| 31.—Institutes | 75.—Interdepartmental courses
(normally listed under
Economics, Government,
or International Service) |
| 33.—International Service | 81.—Interdepartmental Science |
| 37.—Languages and Linguistics | |
| 39.—Law (See catalog of
Washington College of Law
for course listings.) | |
| 41.—Mathematics | |
| 43.—Music | |

A letter prefixing the course number indicates that the course was offered at one of the military installations in the South. All off-campus courses are equivalent to courses offered on the campus and are considered residence credit by the University. The last three digits identify the level of each course, as follows:

- | | |
|--------------------------------|---|
| .001-.099—no credit | .500-.599—advanced undergraduate
and graduate credit |
| .100-.499—undergraduate credit | .600-.799—graduate credit |

In no case will graduate credit be allowed for courses numbered below .500. Undergraduate students are not permitted to register for courses numbered .600 and above.

COLLEGE OF ARTS AND SCIENCES

THE COLLEGE OF ARTS AND SCIENCES was established in 1925 as the College of Liberal Arts. Subsequently, it grew in size and complexity, encompassing on the undergraduate level almost all of the traditional liberal arts and sciences within its programs and faculty. While the founders of The American University intended that the new institution in the nation's capital should develop primarily as a center of graduate studies, experience soon proved that a strong undergraduate program provided significant support for graduate work. Since its establishment, the College has increased its program and faculty to allow the granting of Bachelor's and Master's Degrees and in some fields the Doctorate.

"College" Defined The word "college" in this portion of this catalog refers to the *College of Arts and Sciences only*, a part of the overall University (in which "colleges" and "schools" co-exist as separate educational entities). The College is primarily concerned with liberal studies that convey an understanding of man and the universe and the relationship of men within it. On both the undergraduate and graduate level, the faculty constantly strives to meet this concern by offering educational programs of the highest quality. The academic programs are intended to develop perceptive judgments and an ability to enjoy the pursuit of knowledge throughout life.

A program of balanced general studies is required of all undergraduates and opportunities are afforded through honors programs and independent study for superior students to fulfill their highest intellectual potentialities. The College also makes provision for students to take advantage of advanced work under the direction of the major department in order to perfect skills and acquire the ability to utilize general concepts for the attainment of personal goals. The departments in the College offer graduate degree programs in which a capacity for original thinking, skill in research and correlation with other fields of knowledge are objectives of major consideration.

Admission

See first the graduate or undergraduate section on University Admissions on page 24 or page 31, as appropriate.

Freshman Standing See page 27.

Early Admission See page 26.

Transfer Admission See page 26.

Re-Admission See page 27.

**Advanced Placement,
Advanced Standing, and
Waiver of Courses** See page 27.

Graduate Admission Applications for admission to graduate study in the College of Arts and Sciences are carefully evaluated by the departmental chairman concerned and the Dean. This evaluation takes into account all available information relevant to admission including the results of the Graduate Record Examinations or of other standardized tests. (See individual departmental requirements and University Graduate Regulations. In the special fields such as the fine arts, information regarding performance and other skills and talents is often required. Favorable admissions action also depends upon the ability of the department to assume responsibility for additional graduate students at that time.

Curricula and Degrees The College of Arts and Sciences offers curricula leading to the following degrees: the Associate in Arts, the Bachelor of Arts, the Bachelor of Science, the Master of Science in Science Teaching, the Master of Education, the Master of Science, the Master of Arts, the Master of Fine Arts, the Doctor of Philosophy, and the Doctor of Education.

The requirements of the various degree programs are fully stated in this *Catalog*. *Each student is held responsible for his own status and progress relative to his particular objective.* The role of the academic adviser is to assist the student in his academic planning, not to control his course registrations in relation to various formal requirements. The Adviser, the Dean, and the Registrar are always glad to answer questions

UNDERGRADUATE PROGRAMS

Associate in Arts Degree Some high school graduates do not, or for some reason cannot, remain in college for four years, yet desire to complete a degree program. This fact, along with the development of the junior college, has contributed to the popularity of the Associate in Arts degree which may be awarded after successful completion of two years' study or its equivalent. The College offers the Associate in Arts degree in general studies only.

To receive an Associate in Arts degree the student must (1) complete University requirements, (2) complete through the intermediate level studies in a modern foreign language, and including the above (3) have a minimum 60 credit hours of course work and a cumulative average of

"C" or better. In the College, the last 30 hours must be completed in residence.

Those interested in an Associate in Arts degree must make application in the Registrar's Office by the deadline published for all degrees in each *Schedule of Classes Bulletin*.

Bachelor's Degree See page 29.

Requirements The program required of the undergraduate student working toward a Bachelor's degree may be divided into five component parts:
(1) University Requirements Program (4) Related studies and
(2) College requirements tool courses
(3) Major requirements (5) Electives

University Requirements The University Requirements constitute a pattern of courses in undergraduate education required of all students who earn either the Associate or the Bachelor's degree from the University regardless of their school or major. These distribution requirements concern general education in the broad area of humanities, natural sciences and social sciences. Approximately one-third of the 120 academic hours required for graduation is included in the University requirements. For details see page 29.

College Requirements FOREIGN LANGUAGE. All undergraduate degree students in the College of Arts and Sciences must study a foreign language through its intermediate year. Individual departments of the College may designate specific languages to be used to fulfill the language requirement. Any exceptions to these must be approved by the department chairman involved. The requirement may be waived entirely or partly on the basis of high school achievement in language or a satisfactory score on the Departmental Placement Examinations and/or the Language Achievement Test of the College Entrance Examination Board.

Foreign students who have certified their proficiency in English to the satisfaction of the Office of Admissions may use English to meet the language requirement, providing that their native tongue is not English and they have secured the approval of their department chairman.

GRADUATE RECORD EXAMINATIONS. All graduating seniors in the College are required to take the advanced test of the Graduate Record Examinations in their major field. The area tests of the Graduate Record Examinations are administered to students in fields for which no advanced test is available. These tests are administered in the Spring session, usually in mid-March. Students completing graduation requirements at the end of the Summer or in the Fall session should take the examinations when offered at the University during the previous Spring session. Students should refer to the *Schedule of Classes Bulletin* for the specific schedule in any given year. Those who do not take the Graduate Record Examination when scheduled at the University must make arrangements to take the test at their own expense at an Educational Testing Service center. Information is available at the University Testing and Counseling Center and in the Office of the Dean of the College of Arts and Sciences.

Students who do not perform satisfactorily on these examinations (less than one standard deviation below the national norm) will be per-

mitted to graduate only on the basis of special recommendation of their departmental chairman. Other examinations, or additional course work beyond the minimum stated for graduation, may be required.

Major Requirements The University requirements and the College language requirement, as described, provide a broad intellectual basis of general education. By the end of the sophomore year the student *must choose* a field of concentration, an academic major in one of the departments of the College. It is in this field that he undertakes study in depth.

An academic major requires a minimum of 24 credit hours of course work in a field of concentration. In some departments 36 or more credit hours may be required. Specific requirements are indicated in the section of this *Catalog* which lists departmental offerings.

Those interested in the sciences, mathematics, and music need to take specific courses in the freshman year which are prerequisite to other courses. These students should declare their interest at early as possible with the appropriate academic department and with the Associate Dean for Academic Counseling so that the proper sequence of studies can be arranged.

The requirements of a major, as well as University and College requirements, must be completed before clearance can be given for graduation.

MAJOR FIELDS OF STUDY. Major fields of study for the Bachelor of Arts or Bachelor of Science degrees are indicated along with the departmental course offerings. A single department may provide more than one specialization as, for example, in the case of the Department of Languages and Linguistics where an undergraduate degree may be earned in French, German, Russian, or Spanish.

APPLICATION FOR MAJOR. All students must apply to the department in which they wish to specialize. Admission to the University does not automatically constitute admission to a major program. This must be done on forms provided by the departments, the Dean's office and the Registrar's office no later than the end of the sophomore year. Acceptance is not official until specific approval has been received from the appropriate departmental chairman and is recorded in the Registrar's office.

Students on academic probation normally are not admitted to a major. For admission to major status, academic departments may establish standards beyond the minimum 1.00 cumulative average stated for the University as a whole.

CHANGE OF MAJOR. Students who wish to change their choice of major from one department to another, or from one school to another, must go through the procedure described in the paragraph above. A change in College or School affiliation, when approved, does not become effective until the beginning of the session following the initiation of the request.

Certain departments require students to take a minimum of 12 credit hours on the 300-level or above in fields related to the major. This is to encourage breadth and interdisciplinary interest. Some departments require minors or secondary concentrations.

Departments may also have a tool requirement, such as mathematics or statistics.

Related and tool requirements of the departments are stated, along with major requirements, in the departmental sections of this publication.

Electives In addition to University requirements, College requirements, major requirements, and related and tool requirements, the student will take elective courses to complete the minimum 120 credit hours necessary for graduation. Elective courses, which offer the student an opportunity to pursue interests in fields unrelated to his major, are considered an important part of the academic program in the College.

Pre-Professional Programs Pre-professional curricula are offered in dentistry, medicine, law, physical therapy, medical technology, social work, secondary education, and theology. A student interested in one of these fields should consult the Associate Dean for Academic Counseling before his initial registration. An adviser representing the special field of interest will be assigned.

PHYSICAL THERAPY: In physical therapy, since upper-level courses are not offered at the University, it is expected that the student will transfer to a school having the required curriculum at the end of the sophomore year.

MEDICAL TECHNOLOGY: In medical technology the work of the senior year is completed in a local medical laboratory or hospital.

PRE-THEOLOGY: Many pre-theological students are attracted to The American University. The presence of the Wesley Theological Seminary on the campus, along with the offerings of the Department of Philosophy and Religion and the religious activities under the direction of the University Chaplain, provide excellent conditions for pre-professional studies in religion.

PRE-MEDICAL: The Association of American Medical Colleges (AAMC) publishes annually an *Admissions Requirement Handbook* on pre-medical programs and the requirements for admission to AAMC approved medical schools. The pre-medical student is urged to study a copy of this publication, which may be ordered through the Association of American Medical Colleges, Department 1B, 2530 Ridge Avenue, Evanston, Illinois.

Medical schools normally require a minimum of three years of undergraduate studies and strongly recommend completion of the Bachelor's degree. There is no inclination to prescribe the undergraduate major in view of an interest in students with varied intellectual concerns and backgrounds.

While there is some variation of practice, medical schools in general require the following undergraduate studies: two years of chemistry, one year of biology, one year of physics, and one year of English. In some instances one year of mathematics and two years of a modern foreign language also are required. It is emphasized that these are minimum requirements and, again, the student is urged to consult the *Admissions Requirement Handbook* (available in the offices of the Departments of Biology and Chemistry) and his adviser.

PRE-DENTISTRY: The basic pre-medical pattern applies to pre-dental students as well as to others interested in veterinary medicine, medical technology, and other related fields.

It is usual for medical and dental schools to require a medical aptitude examination administered in the prospective student's junior year in college. The applicant is responsible for arranging for this examination and inquiries should be addressed to Medical College Admission Test, The Psychological Corporation, 304 East 45th Street, New York, N.Y.

A Pre-Medical Advisory Committee has been established in the College of Arts and Sciences. The purpose of this committee is to assist in filing for the Medical Aptitude Test, in securing letters of recommendation, etc. It is recommended that students interested in a career in medicine consult a member of the committee early in their undergraduate program.

GRADUATE PROGRAMS

See the section designated as Graduate Studies in this Catalog before reading the following.

The degree of Master of Arts may be earned in the College in the fields of anthropology, art, broadcasting, church music, economics, education, English, French, German, history, journalism, linguistics, mathematics, music, music education, philosophy, psychology, public relations, religion, Russians, sociology, Spanish, speech arts, and statistics.

The Master of Science degree is offered in biology, chemistry, and physics. There are also programs leading to the Master of Education and the Master of Science in Science Teaching degrees which are especially designed for teachers. Finally, the Master of Fine Arts degree is offered.

For information regarding the Master of Science in Science Teaching (M.S.S.T.) degree students are referred to the co-ordinator of the program (presently Dr. Leo Schubert), the chairman of the major science department, and the chairman of the Department of Education. Students interested in the Master of Education (M.Ed.) program are referred to the chairman of the Department of Education. The Master of Fine Art (M.F.A.) is administered by the chairman of the Department of Art.

The Doctor of Philosophy degree may be earned through the departments of the College in the fields of chemistry, economics, education, history, mathematics, philosophy, physics, psychology, sociology, and statistics.

The Doctor of Education degree may be earned through the Department of Education.

Additional information on admission to graduate studies, advancement to candidacy, comprehensive examinations, and theses and dissertations may be found under departmental listings and in the section of the Catalog dealing with Graduate Studies.

- Statutory Limitations on Graduate Admission and Candidacy** The statutory limitations on graduate admission and candidacy may be found in the section of this Catalog relating to Graduate Studies and in the regulations of the respective departments elsewhere in this Catalog.
- Required Graduate Study Registration** See the Index to find this topic.
- Consortium of Universities** See the Index to find this topic.

Professional Certificates in Education The Department of Education offers Professional Certificates in Elementary Education, Secondary Education, School Administration and Supervision.

Students who desire these certificates are required to follow a program of courses appropriate to the particular certificate. A minimum of 30 credit hours beyond the Master's degree must be completed with grades of B or better.

Professional certificates may be earned by students who register in non-degree status. Under these circumstances, however, no more than twelve credit hours (and this depending upon the relevance and the quality of the work) may be applied toward any degree for which the student subsequently is admitted.

ACADEMIC INFORMATION

General academic information and regulations are presented in the University's *Schedule of Classes Bulletins* and the forepart of this catalog which outline policy on academic loads, registration procedures, the grading system, University honors, and other subjects of interest to students and faculty. Unless otherwise indicated it can be assumed that the College operates under these regulations. Within minimum University requirements, however, a School or College may establish other policies for its own academic program.

The following regulations are applicable to all students in the College of Arts and Sciences:

Absences The obligation of undergraduate students to attend class sessions is assumed. Absences must be justified to instructors with the understanding that it is the student's responsibility, if excused, to make arrangements for make-up work.

Veterans and other students studying at government expense are subject to the loss of educational benefits for excessive absences.

Class attendance for graduate students is voluntary.

Academic Probation and Dismissal See the Index to find this subject.

Undergraduate students are required to maintain a 1.00 cumulative index (a "C" average).

An evaluation is made of a student's academic record at the end of each year of full-time study (freshman, sophomore, junior), or its equivalent in the case of part-time students.

A freshman who fails to achieve a 1.00 index ("C" average) during

his first two semesters (24-30 credit hours), and whose cumulative index is between .750 and 1.00 will be placed on academic probation for his second year by the Dean.

Sophomores and juniors who do not meet the minimum 1.00 cumulative index are subject to dismissal.

Students who enter their senior year in good standing but who drop below a 1.00 cumulative index any time thereafter are subject to dismissal.

Performance in the Major The minimum acceptable grade for courses used in fulfillment of the requirements of the undergraduate major is C. Course credit in the major field for which the grade of D is received may be used as elective credit. If in computing all of these grades together, however, the student has less than a 1.00 average in the courses of his major field he is subject immediately to dismissal, regardless of the cumulative index.

Dean's List The College of Arts and Sciences publishes a Dean's List after each Fall and Spring semester. A student who achieves a minimum of 2.50 semester average and completes not less than 15 credit hours of work in the semester will be included in the Dean's List.

Graduate Credit for Seniors See page 28.

Students in the College of Arts and Sciences will not be permitted to earn graduate credit before the last semester of the senior year.

Residence Requirements See page 31.

An undergraduate student who transfers from another institution with advanced standing in the field of the major is required to do a minimum of 18 credit hours of upper-level course work in the department of the College from which he is recommended for graduation. More may be required by the department chairman.

Transfer Credit See page 26.

THE HONORS CURRICULUM

A special Honors Curriculum has been established within the College and exists on three levels: Honors English for freshmen, General Honors for sophomores, juniors, and seniors, and Departmental Honors for juniors and seniors.

Honors English (Freshmen) Freshmen are selected for admission to the special program in Honors English on the basis of their academic records of high school achievement and their College Board scores. Students are notified of this appointment during summer orientation or prior to their registration in September. From among the participants in the freshman Honors English program, eligible students will be invited to join the General Honors Colloquia in the sophomore year.

General Honors Students who are selected for General Honors take a series from four to six colloquia across consecutive semesters under the direction of Honors Faculty. The topics vary but are usually drawn from the humanities and

the social and natural sciences. Special attention is given to value and relational considerations and, generally, to theoretical topics.

The Honors Colloquia are carried by students as elective courses for three semester hours of academic credit in each semester of General Honors study. It should be noted that Honors Colloquia are credited toward University Requirements in the appropriate field.

Students are invited to participate in the colloquia after careful analysis of previous achievement in college work. Interested students may apply for admission to General Honors to the Chairman of the Honors Board. Upon the successful completion of the colloquia, the designation "General Honors" is indicated on the commencement program.

Departmental Honors Departmental Honors study, limited to juniors and seniors, is under the direction of the chairman of the department in which the student is a major.

Up to 12 credit hours may be awarded for Departmental Honors projects. This usually is at the rate of three credit hours each semester across the four semesters of the junior and senior years.

This study is handled on a tutorial basis, with the Honors candidate doing independent study in an area of special interest. Any major with a superior academic record may apply to his department for this special privilege. Those who complete this sequence graduate with "Departmental Honors," a distinction which is indicated on the commencement program.

CENTER FOR LIBERAL STUDIES

The Center for Liberal Studies is a non-departmental agency governed by a Board of Directors which is responsible to the Dean of the College of Arts and Sciences. The purpose of the Center is to enhance the importance of the humanities, both in the University and in the greater Washington community as well.

The Center sponsors an Artist-in-Residence program which has brought to the campus, at various times, a painter, a composer and a playwright. In addition, the Center sponsors study, research and creative endeavors in philosophy, letters and the arts, seeking, at the same time, ways in which these areas may be more effectively developed in the curriculum.

A major activity of the Center in recent years has been the sponsorship of an annual Forum which brings to the campus a number of scholars and artists for lectures, discussions and other presentations centering around a common theme that cuts across the lines of departmental specialization. The Forum also provides opportunity for student-faculty discussions relating to the Forum topic. The Forum has become one of the most significant events in the cultural life of the University and the Washington community. Past Forum topics include:

- 1964 Designing the Urban Environment
- 1965 The Search for Meaning in the Mid-Sixties
- 1966 The Arts in the New World of Machines

- 1967 Free Man and the Future
 1968 The Contemporary Artist and "The Tradition"

SPECIAL LECTURES

Convocations and lectures are an integral part of the intellectual experience of the University community. Two important lectureships have been established in the College: The Faith and Freedom Lectures and the Bishop John Fletcher Hurst Philosophy Lectures.

THE FAITH AND FREEDOM LECTURES

The Faith and Freedom Lectures bring distinguished scholars to the campus to discuss some aspect of man's spiritual heritage relative to its implication for the concept of freedom. The lecturers in this series have been as follows:

<i>Year</i>	<i>Lecturer</i>
1959	Dr. Nels F. S. Ferre, <i>Professor of Theology</i> Andover-Newton Theological Seminary
1960	Dr. Paul Tillich, <i>University Professor</i> Harvard University
1961	Dr. Hans Morgenthau, <i>Professor of Political Science</i> University of Chicago
1962	Dr. John Wild, <i>Professor of Philosophy</i> Northwestern University
1964	Professor Paul Lehmann, <i>Auburn Professor of Systematic Theology</i> Union Theological Seminary
1965	John Courtney Murray, S.J., <i>Professor of Theology</i> Woodstock College
1966	Dr. Martin E. Marty, <i>Professor of Church History</i> University of Chicago
1967	Dr. John C. Bennett, <i>President</i> Union Theological Seminary
1968	Dr. Eugene Carson Blake, <i>General Secretary</i> World Council of Churches

BISHOP JOHN FLETCHER HURST PHILOSOPHY LECTURES

These lectures were established in honor of the founder of the University. Each year some philosophical theme is developed by a prominent scholar in this field. The professors of philosophy contributing to past series are:

<i>Year</i>	<i>Lecturer</i>
1958	Walter Kaufman, Princeton University "The Significance of Martin Buber"

- 1959 Richard Brandt, Swarthmore College
"Ethical Relativism"
- 1960 Maurice Mandelbaum, The Johns-Hopkins University
"Historicism, a Key to the Nineteenth Century"
- 1961 George Shrader, Yale University
"Ethics and Existence"
- 1962 Justus Buchler, Columbia University
"Reflections on the Problem of Meaning"
- 1963 Brand Blanshard, Yale University
"The Sane and the Eccentric in Present Day Thought"
- 1964 Ernest Nagel, Columbia University
"Determinism and Human Action"
- 1965 Stuart Hampshire, Princeton University
"The Power to Act"
- 1966 Wilfrid Sellers, University of Pittsburgh
"Science and Ethics: A Study in First Principles"
- 1967 Hans Jonas, New School for Social Research
"Jewish and Christian Elements in the Western Philosophical Tradition"
- 1968 John Smith, Yale University
"Religion and Secularism"

THE HUMANITIES SYMPOSIUM

For the past several years the Division of the Humanities has sponsored an annual Humanities Symposium. This symposium, which brings a panel of scholars to the campus to discuss an announced topic, is conducted in the spring by one of the departments in the area of the humanities and the fine arts. It has become an important event on the calendar of the University.

COURSES OF INSTRUCTION

The following pages describe the offerings of the departments of the College of Arts and Sciences. *Session Schedule of Classes Bulletins* are published three times annually (Fall, Spring, and Summer) and should be used for registration purposes. The University reserves the right to cancel or change any course listings in this bulletin or other published announcement at any time.

Course Numbering System See page 46.

Undergraduate Reading
and Research Courses See page 22.

Graduate Reading and Master's degree students see page 34.
Research Courses Doctoral students see page 34.

Registration for Reading
and Research Courses See page 35.

DEPARTMENTS IN THE COLLEGE OF ARTS AND SCIENCES

Anthropology

Professors:

GORDON MACGREGOR
HARVEY C. MOORE (*Chairman*)
ABSOLOM VILAKAZI
Associate Professors:
JOHN JAMES BODINE
CHARLES W. MCNETT, JR.

GEORGE L. HARRIS (SIS)

Assistant Professors:
GARY W. HUME
RUTH H. LANDMAN
(*On leave 1968-69*)
Adjunct Professors:
BELA C. MADAY

LUCILE E. ST. HOYME

Instructor:
GEOFFREY BURKHART
Adjunct Professor:
HERBERT H. VREELAND III
Lecturer:
JANE PHILIPS

UNDERGRADUATE DEGREE

Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and Mathematics	(12 hours)

Recommended course:

Two semesters of approved laboratory science (8 hours).

Social Sciences are normally satisfied by major and related requirements. Consult department (12 hours).

Language Requirement Through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Departmental Requirements MAJOR COURSES

Introductory Courses (6 hours)

3.201 Introduction to Cultural Anthropology

3.202 Introduction to Physical Anthropology

3.203 Introduction to Archeology

Courses at 300 or Above Level (27 hours)

37.300 Introduction to Language

3.331 Variation in Man

3.332 Old World Archeology or 3.333 New World Archeology

3.335 Ethnographic Survey

3.439 Research Methods: Application of Statistical Methods

3.536 Anthropological Theory

and 15 hours of electives in Anthropology, at the 300 level or above, to be chosen in consultation with departmental adviser.

The student may apply other courses in Linguistics offered by the Department of Languages and Linguistics if his department adviser approves.

RELATED COURSES

Introductory Courses (9 hours)

65.200 Introduction to Sociology, 57.200 General Psychology, and

Courses at 300 or Above Level (12 hours)

Chosen in consultation with departmental adviser. Must include 6 hours in Sociology or Psychology.

Electives To complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREE

(Students should consult department offices for the latest information on graduate courses.)

Master of Arts

Course Requirements Minimum of 30 hours of approved graduate work including at least two courses on the 600 or 700 level, plus 3.797 Master's Thesis (3-6 hours).

Written Comprehensive Examinations Two, including one in the general history of anthropological theory and method; one in a specialized field of anthropology or an approved related field.

Other Requirements Thesis and oral defense of thesis.

Examination Fields CORE FIELD

Graduate Comprehensive 3.006 History of Anthropological Method and Theory

SPECIALIZED FIELDS

3.016 Ethnology and Social Anthropology

3.019 Archeology (Old World Prehistory)

3.020 Archeology (New World)

3.017 Ethnography (a specified area)

3.021 Physical Anthropology

3.022 Cultural Area Analysis

3.018 Linguistics

(with emphasis on specified area)

3.023 Language and Cultural Analysis

UNDERGRADUATE COURSES

3.201 Introduction to Cultural Anthropology (3)

An introduction to an understanding of the concept of culture and the cultures of man and their technical, social, religious, ideological and linguistic aspects.

3.202 Introduction to Prehistory (3)

An introduction to the cultural development of man up to the beginnings of recorded history including archaeological sequences and methods.

3.203 Introduction to Physical Anthropology (3)

An introduction to the study of man's biological development as seen in

evolution, modern varieties of the human species and the underlying biological and genetic principles.

3.331 Variation in Man (3)

Study of the variation in man by race, age, and sex.

Prerequisite: 3.202.

3.332 Old World Archaeology I (3)

A study of the cultural development of man in Europe, Africa, and Asia from his earliest cultural beginnings through the early metal ages.

Prerequisite: 3.203.

3.333 New World Archaeology I (3)

A study of the prehistory and rise of civilizations in the North and South American continents from the arrival of the Indian to the time of European contact.

Prerequisite: 3.203.

3.335 Ethnographic Survey (3)

An introduction to and comparison of the culture areas of the world. A survey of representative societies to examine the role of economic, social, political, and religious systems at various levels of complexity.

Prerequisite: 3.201.

3.430 Primitive Religions (3)

Theories and concepts relating to religions and religious development and behavior, exclusive of the great world religions. Role of religion in influencing behavior and integrating cultures.

Prerequisite: 3.201 and 3.335.

3.431 Primitive Social Organization (3)

Analysis of systems of organization of individuals into groups with particular reference to kinship and lineage systems, functional requisites of a society, of law and political control groups.

Prerequisite: 3.201 and 3.335.

3.432 Economic Anthropology (3)

Structure, function and transformation of economies in tribal and peasant societies of the non-Western world.

Prerequisite: 3.201.

3.433 Primitive Art (3)

The visual and plastic arts and their symbolism and expression in the cultures of Africa, Oceania and the New World.

Prerequisite: 3.201 or permission of instructor.

3.434 Community Studies (3)

Anthropological theory and method relating to the study of communities within complex societies.

Prerequisite: 3.201 and 3.335 or 3.430.

3.435 Primitive Political Organizations (3)

A study of primitive political systems, their organization and function. Theories of law in primitive and peasant societies.

Prerequisite: 2.201 and 3.431.

3.439 Research Methods (3)

Survey of basic techniques in archaeology, linguistics, physical and cultural anthropology; student practice in field work and laboratory techniques required. Introduction to descriptive and inferential statistics use in anthropology and archaeology with emphasis on non-parametric methods. Methods of individual fields presented in different semesters.

May be repeated for credit.

Prerequisite: Selected 200 and 300 level courses.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses require permission of instructor or chairman of department.)

3.521 New World Archaeology II (3)

Contributions of archaeology to the cultural anthropology of the New World. An appraisal of theories, methods, archaeological techniques and problems. Consideration of the origins of the advanced civilizations of Middle and South America.

Prerequisite: 3.333 or permission of instructor.

3.524 Old World Archaeology II (3)

Contributions of Archaeology to the cultural anthropology of the Old World. Theories, methods, archaeological techniques and problems. Origins of advanced civilizations and urban development.

Prerequisite: 3.332 or permission of instructor.

3.530 Human Evolution (3)

A study of the primate background and variation; early man in evolutionary and ecological perspective; fossil evidence; genetic, biological, and cultural factors.

Prerequisite: 3.331.

3.532 Culture Change (3)

Dynamics of culture. Stability, form, growth. Determinants of and barriers to change. Processes of acculturation, assimilation and integration of ethnic groups.

Prerequisite: 3.201 and one additional course in cultural anthropology.

3.534 Cultural Analysis (3)

An anthropological approach to an understanding and appreciation of culture, culture dynamics and relativity problems of cross-cultural relations, and individual adjustments to other cultures. Open only to non-majors especially graduate students to whom an appreciation of anthropology is essential to their major field of study.

Prerequisite: Permission of instructor.

3.535 Culture and Personality (3)

A study of the cultural determinants of personality. Theories of psychological anthropology; psychological development of and cultural stress on individuals in primitive societies.

Prerequisite: 3.335 and 57.200.

3.536 Anthropological Theory (3)

History of the discipline. Development of systematic theory, method and approaches of anthropology and exploration in the fields of ethnology, archaeology, physical anthropology and linguistics. The outstanding theorists of the field. Open to anthropology majors who are seniors or graduate students.

Prerequisite: At least a course in each of the above fields.

3.537 Language in Culture (3)

A study of the relation of language to culture; distribution of languages; cross-cultural consideration of language structure; problems of language and culture change.

Prerequisite: 3.201 or 3.335; 37.300 or 37.500.

3.539 Ethnology (3)

Studies of traditional culture areas, cultures and societies of various peoples of the world. Individual area courses will consider the ethnology and peoples of Sub-Saharan Africa, Europe, Middle East, North, Middle and

South America, Caribbean, Asia and Oceania.

May be repeated for credit.

Prerequisite: 3.201, 3.335, 3.431.

3.540 Contemporary Social and Cultural Development (3)

Analysis of the contemporary cultural changes and the problems of peoples of developing nations and other ethnic groups participating in urban and industrial societies. Individual courses will consider societies of Sub-Saharan Africa; Europe; Middle East and North Africa; South Asia, Southeast Asia; Far East; Oceania; indigenous peoples of North, Middle and South America. May be repeated for credit.

Prerequisite: 3.532 and 3.539—Respective course area.

3.603 Advanced Field and Research Method in Cultural and Social Anthropology (3)

Research methods, objectives and development of theory and principles, practices in contemporary cultural and social anthropological and archaeological field work. Different semesters deal with individual methodologies. May be repeated for credit.

3.731 Seminar: Problems in Anthropology (3)

Intensive analysis of selected theoretical and methodological problems in one of the four fields of anthropology.

May be repeated for credit.

3.797 Master's Thesis Seminar (3-6)

Consultation and guidance in the selection, research studies and preparation of the master's thesis in anthropology.

Professors:

SARAH BAKER (*Emeritus*)
 BEN L. SUMMERFORD
 ROBERT F. GATES
 ANDREW S. KECK

Associate Professors:

LOTHAR BRABANSKI
 ROBERTO D'ARISTA (*Chairman*)
 IRENE ENO
 HELENE HERZBRUN
 (*On leave 1968-69*)

Assistant Professors:

MARY GARRARD
 MARJORIE HIRANO
 WILLIAM OLDAKER
 LUCIANO PENA Y LILLO
 THEODORE TURAK

Instructor:

RUTH MEIXNER

Adjunct Professors:

WILLIAM CALFEE
 DOROTHY DAY
 LUCILLE FIREY

STEPHEN KRAFT
 HUBERT LECKIE
 ROBERT B. SHAFFER

Professorial Lecturers:

ROBERT LAUTMAN
 DIANE RUSSELL
 CLAIRE SHERMAN
 PRENTISS TAYLOR

Lecturers:

GENE DAVIS
 LLOYDZUM FELDE
 VERA OGBURN
 GERALD WARTOFSKY

UNDERGRADUATE DEGREE Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities are normally satisfied by major and related requirements. (12 hours) Consult department.	
	Science and Mathematics	(12 hours)
	Social Science	(12 hours)

Language Requirement One language must be taken through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Departmental Requirements MAJOR COURSES (30-36 hours)

Students majoring in **Art** complete one of the following four programs of study (these are minimal requirements):

Fine Arts—36 hours of Studio courses (painting, drawing, ceramics, sculpture and printmaking) with at least 6 hours in three of these four Studio fields.

Art Education—30 hours of Studio courses with at least 3 hours in each of five Studio fields (painting, drawing, sculpture, printmaking

or etching and ceramics and at least 12 hours (including above 3 hours) in one of Studio fields plus 6 hours in 5.370 Crafts for the Art Teacher, and 5.371 Methods of Teaching Art. Student in Art Education program is required to take both 5.370 and 5.371 in addition to 30 hours of studio. 5.371 is taken in conjunction with 21.445.

Design—30 hours of Design courses including 5.348/9 Design Techniques I & II, 5.350/1, Design Fundamentals I & II, and 6 hours of Studio courses.

Interior Design—18 hours of Interior Design courses, 12 hours of Design including 5.350/1 Design Fundamentals I & II and 5.348/9 Design Techniques I & II, and 6 hours of Studio courses.

Students majoring in **Art History** complete 30 hours of Art History including 7.100/1, Survey of Art I and II.

RELATED COURSES

All Art majors (in any of the four programs listed above) are required to take 12 hours of art history, including 7.100/1 Survey of Art I and II. Those in Interior Design program are also required to include 7.102/3 Survey of Decorative Arts I and II in their art history requirement. In addition, Art majors in the Art Education program are required to take 6 hours in 21.302 Foundations of Education and 9 hours in 21.445 Student Teaching: Secondary Schools.

All Art History majors are required to take 6 hours in Studio courses and 12 hours in related Humanities or Social Sciences at the .300 level or above.

ELECTIVES

Sufficient other courses, including the University Requirements, are required to complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

Master of Fine Arts in Painting or Sculpture

Admission Requirements	A minimum average of B in the undergraduate major plus departmental approval of applicant's portfolio of art work is required.
Course Requirements	Requirements include a minimum of 36 credit hours of approved graduate work, including: 6 credit hours in 5.797 Master's Thesis Seminar; 21 credit hours in Studio chosen from; 5.520/1; 5.533; 5.560; 5.700; 5.792; 5.793; and 5.794; and 9 credit hours in graduate art history.
Written Comprehensive Examinations	Two are required, including one in theory and techniques of painting or sculpture, and one in a specialized field of art history.
Graduate Comprehensive Examination Fields	CORE FIELDS in Fine Arts (choose one). 5.001 Theory and Techniques of Painting 5.002 Theory and Techniques of Sculpture

SPECIALIZED FIELDS in Art History (choose one from the list below under Master of Arts degree).

Thesis Execution of an original work or works of art defended by written critical analysis of problem undertaken.

Master of Arts in Art History

Admission Requirements A minimum average of B in undergraduate major is required. If undergraduate major was not in Art History, students admitted to program will be required to have completed or complete 18 hours in Art History in addition to 30 hours required for degree. Reading knowledge of French, German or Italian must be certified during first semester (see Language tool requirement).

Course Requirements Requirements are a minimum of 30 credit hours of approved graduate course work (combined total of at least 48 credit hours of undergraduate and graduate art history) including 6 credit hours in graduate research seminars (7.792 or 7.793).

Written Comprehensive Examinations Two, including one examination in Core Field and one in Specialized Field.

Graduate Comprehensive Examination Fields

CORE FIELD

5.003 Survey of Western Art (Greek to Modern).

SPECIALIZED FIELDS

5.009 Medieval Art

5.010 Renaissance and Baroque Art

5.011 Modern Art

5.015 Sculpture: Renaissance through Modern

5.018 Painting: Renaissance and Baroque

5.019 Painting: Rococo through Modern

5.020 Art in the United States

Thesis Substitution Satisfactory completion of a substantial research paper in each of two Master's Research Seminars is required to complete the degree.

UNDERGRADUATE COURSES

STUDIO

5.130 Oil Painting (1)

Basic problems of figure and still life painting. Emphasis on color and design. Primarily for amateurs and students other than art majors. May be repeated for credit.

5.160 Sketch Class (1)

Life drawing with emphasis on rapid sketch. May be repeated for credit.

5.320 Creative Painting (2-3)

Fundamentals of painting. Comprehensive consideration of color, composition and drawing from still life and figure and in individually assigned projects. May be repeated for credit. Student registers in elementary section in first year, intermediate section second year and advanced section in third and fourth years.

5.340 Sculpture (2-3)

Problems and principles of sculpture. Acquaintanceship with tools, techniques, materials for plastic expression. May be repeated for credit.

5.344 Ceramics (3)

Development of an understanding of the nature of clay and its potentials and limitations and an awareness of the vitality and spontaneity of form and decoration in making pottery.

5.360 Drawing (3)

Structural drawing from the human figure. Anatomy, movement, expression. Course covers range of techniques and mediums. May be repeated for credit.

5.364 Printmaking I (3)

The exploration of wood cut, serigraphy and various other print techniques as a media of creative expression.

5.365 Printmaking II (3)

Exploration of etching and other print techniques. Emphasis on experimentation with combined and new media.

DESIGN

5.348 Design Techniques I (3)

Showing through design projects a range of drawing media required in design presentation. Each semester is independent in its content. May not be repeated for credit.

5.349 Design Techniques II (3)

Sequel to 5.348. May not be repeated for credit.

5.350 Design Fundamentals I (3)

Theory and techniques of design, applicable to all problems of visual presentation: layout, display, graphics, etc. Each semester is independent in itself and may be taken at any time.

Prerequisite: 5.348 and/or 5.349 or concurrent registration.

5.351 Design Fundamentals II (3)

Sequel to 5.350.

Prerequisite: 5.350 or 5.348 and/or 5.349 or concurrent registration.

5.352 Lettering and Typography I (3)

Theory and analysis of letter forms as design and symbol. Study of type faces, their arrangement and setting.

5.353 Lettering and Typography II (3)

Continuation of 5.352; particular application to advertising design.

Prerequisite: 5.352, or permission.

5.354 Creative Photography I (3)

Introduction to the problems of the camera and its use as a creative medium in the field of two-dimensional design. Laboratory and lecture.

5.355 Creative Photography II (3)

Continuation of 5.354.

Prerequisite: 5.354, or permission.

5.356 Advanced Design I (3)

Experimentation and practice in design problems relating to visual communication; emphasis on techniques and solutions of professional problems.

Prerequisite: 12 credit hours of design, including 5.350/1 and 5.348/9 or permission.

5.357 Advanced Design II (3)

Practical consideration and execution of complex design problems involving all previous design training. Continuation of 5.356.

Prerequisite: 5.356 or permission.

5.368 Interior Design I (3)

Basic principles, materials and methods used in the vertical and horizontal designing of simple interior spaces. Lecture and laboratory.

Prerequisite: 5.348 or 5.349 or concurrent registration.

5.369 Interior Design II (3)

Correlation of materials and furnishings with the functional requirements of multiple interior spaces. Lecture and laboratory.

Prerequisite: 5.368.

5.378 Problems of Traditional Interiors (3)

Intensive investigation of aesthetic solutions to the designing of period interiors. Lectures and laboratory.

Prerequisite: 7.102 and 7.103.

5.379 Problems in Modern Interiors (3)

Intensive investigation of aesthetic solutions to the designing of modern interiors. Lectures and laboratory.

Prerequisite: 7.102 and 7.103.

5.388 Techniques of Interior Design (3)

Theory and practice of interior design, including the design, specification and fabrication of furnishings and equipment for interiors. Lectures and projects.

Prerequisite: 5.369.

5.389 Senior Problems in Interior Design (3)

Thorough analysis, organization and solution of complex design problems in definitive and professional presentations. Laboratory.

Prerequisites: 12 hours of interior design including 5.369 and 5.388.

ART EDUCATION

5.370 Crafts for the Art Teacher in Secondary Schools (3)

Exploration of various 2-dimensional and 3-dimensional crafts appropriate to teaching art at secondary level through studio practice. Art majors only.

Prerequisite: Juniors or seniors with 12 credit hours of studio courses.

5.371 Method of Teaching Art in Secondary Schools (3)

Covers theoretical and practical considerations of teaching art at secondary level through lecture, discussion and observation. Meets for 6 weeks prior to 9 weeks of student teaching. Must be taken in senior year in conjunction with 21.445 Student Teaching: Secondary Schools (9). Art majors only.

Prerequisite: 5.370 and admission to 21.445.

5.380 Teaching Art in Elementary Schools (3)

Methods and techniques of teaching art as part of regular elementary school instruction. *Limited to Education majors in Elementary school program or permission.*

ART HISTORY

7.100 Survey of Art I: Ancient and Medieval (3)

Illustrated historical introduction to architecture, sculpture and painting with art presented as an objectification and record of man's major beliefs and ideas. Field trips.

- 7.101 Survey of Art II: Renaissance and Modern (3)**
Illustrated historical introduction to architecture, sculpture and painting in Western world between 1500 and 1950. Field trips.
- 7.102 Survey of the Decorative Arts I (3)**
Illustrated historical introduction to the decorative arts, furniture, and interior architecture, from the Greeks through the 17th century.
- 7.103 Survey of the Decorative Arts II (3)**
Illustrated historical introduction to the decorative arts, furniture, and interior architecture, from the 18th through the 20th centuries.
- 7.104 Introduction to Visual Arts (3)**
Develops visual perception and presents philosophical and theoretical background necessary for an informed and sensitive appreciation of painting, sculpture, architecture and the decorative arts. Lectures and visual material. *Does not satisfy art or art history major or related requirements.*
- 7.301 Greek Art (3)**
Covers Greek art and architecture from the Archaic period through the Hellenistic.
- 7.302 Roman Art (3)**
Covers the art and architecture of Rome from the Republic through the Empire. *Prerequisite:* 7.100 or 7.301.
- 7.304 Architecture: Renaissance and Baroque (3)**
Renaissance, Mannerist and Baroque architecture in Italy and spread of styles to North Europe to 1700. *Prerequisite:* 7.101 or 7.301.
- 7.305 Architecture: Rococo through Modern (3)**
Development of architecture in Europe and the United States from 1700 to present. *Prerequisite:* 7.101 or 7.304.
- 7.308 Oriental Art I: Chinese (3)**
Main currents and monuments of Chinese art from earliest (c. 2500 B.C.) to 1800 A.D.
- 7.309 Oriental Art II: Japanese and Southeast Asia (3)**
Arts and culture of the Far East with emphasis on Japan, India, and other Asian civilizations (excluding China).
- 7.306 Modern Art (3)**
Painting, sculpture and architecture since 1900 in Europe and the United States. Investigates aesthetic theories common to contemporary art movements.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses are open only to graduate students.)

STUDIO

- 5.520 Techniques of Etching I (3)**
A course in engraving, etching and aquatint, designed to give the advanced student a thorough knowledge of traditional and modern methods in intaglio printing. May be repeated once for credit.
Prerequisite: 6 credit hours Printmaking (5.364/5) or 12 credit hours drawing.

5.521 Techniques of Etching II (3)

Continuation of 5.520. May be repeated once for credit.
Prerequisite: 5.520.

5.533 Materials and Techniques of Painting (3)

Technical investigation of painting methods from Renaissance to present. Preparation of grounds, media, under-painting, glazing, emulsions for tempera, etc.
Prerequisite: 12 credit hours of painting.

5.560 Drawing (3)

Experiments in the creative and expressive quality of drawing. Development of a personal creative expression.
Prerequisite: 12 credit hours of undergraduate drawing.

5.700 Criticism of Painting (3)

Theoretical and philosophical consideration of painting. Detailed analysis of artistic works. Lecture and slides. Formerly 7.700/7.701.
Prerequisite: Admission to Graduate Program in Fine Arts or permission.

5.792 Art Laboratory—Painting (3)

Intensive investigation of ideas and techniques in painting. Emphasis on experimentation, leading to development of individual style.
Prerequisite: 24 credit hours of painting or graduate standing.

5.793 Art Laboratory—Sculpture (3)

Intensive investigation of sculpture with emphasis on experimentation leading to development of individual style.
Prerequisite: 24 credit hours of sculpture or graduate standing.

5.794 Directed Project in Fine Arts (3)

Open only to M.F.A. candidates who have completed 6 credit hours of 5.792 or 5.793 (Art Laboratory). Student arranges independent study in painting or sculpture (etching may be specially arranged for students doing thesis in etching) under individual faculty with approval of faculty member and department chairman. Qualitative grade will be given. May not be repeated for credit.

5.797 Master's Thesis Seminar (6)

M.F.A. candidate with permission of Chairman.

ART HISTORY

7.500 Renaissance Painting (3)

Painting in Italy from the 14th through the 16th centuries, beginning with the late Gothic tradition in Florence and Siena, and dealing with the Early and High Renaissance and Mannerism in Florence, Rome and Venice. See 7.510 for painting in the North.
Prerequisite: Six hours of art history including 7.101 or equivalent.

7.501 Baroque Painting (3)

17th century painting in Italy, Spain, France, the Netherlands, and England. Emphasis on Caravaggio, Rubens, Rembrandt, Vermeer, Poussin, and Velasquez.
Prerequisite: Six hours of art history including 7.101 or equivalent.

7.502 Mediterranean Medieval Art (3)

Early Christian in Italy; Byzantine in the Near East; Romanesque in Italy.
Prerequisite: 6 credit hours of undergraduate art history including 7.100 or equivalent.

7.503 North European Medieval Art (3)

Art from the early Christian period through Romanesque to 1400 (manuscript illuminations and French cathedrals; sculpture, stained glass).

Prerequisite: 6 credit hours of undergraduate art history including 7.100 or equivalent.

7.504 Gothic Art (3)

Architecture, painting, sculpture, manuscript illuminations and stained glass, from 12th to 15th centuries, in Europe.

Prerequisite: 6 credit hours of art history including 7.100 or equivalent.

7.506 Renaissance Sculpture (3)

Italian sculpture from 1400 to 1700 with stress on achievements of Donatello, Michelangelo, Bernini.

Prerequisite: 6 hours of art history, including 7.101, or permission of instructor.

7.507 Modern Sculpture (3)

Changes in sculpture from 1700 to the present with stress on innovations of Rodin, Brancusi, Moore and the American abstractionists.

Prerequisite: 6 hours of art history including 7.101 or permission of instructor.

7.508 Rococo Through Impressionism (3)

Painting in the 18th and 19 centuries in Europe, covering the styles of Rococo, Neo-Classicism, Romanticism, Realism, and Impressionism, with emphasis on such artists as Watteau, David, Delacroix, Goya, and Monet.

Prerequisite: Six hours of art history including 7.101 or equivalent.

7.509 Modern Painting (3)

Painting of the 20th century in Europe and America, from Post-Impressionism through contemporary painters, dealing with styles such as Cubism, Fauvism, Surrealism, and Abstract Expressionism, and concentrating upon major artists such as Cezanne, Van Gogh, Gauguin, Picasso, and Matisse.

Prerequisite: Six hours of art history including 7.101 or equivalent.

7.510 Northern Renaissance Painting (3)

Painting in France, Germany and the Netherlands from the late 14th through the 16th centuries. Emphasis upon major artists such as Jan van Eyck, Durer, Holbein, Bruegel.

Prerequisite: Six hours of art history including 7.101 or equivalent.

7.511 Art in the United States: Architecture (3)

Architecture in the United States from 17th century to present, as seen against its European antecedents and as an independent style.

Prerequisite: 6 credit hours of art history including 7.101 or equivalent.

7.512 Art in the United States: Painting (3)

Painting in the United States from 17th century to present as seen against its European antecedents and as an independent style.

Prerequisite: 6 credit hours of art history including 7.101 or equivalent.

7.515 Graphic Art (3)

Deals with unique qualities of graphic art (drawings and prints) from Renaissance to present.

Prerequisite: 6 credit hours of art history including 7.101 or equivalent.

7.520 Seminar in Art History (3)

Reports and critical discussion of research papers on topic announced for semester. May be repeated for credit.

Prerequisite: 12 credit hours of art history and permission.

7.792 Research Seminar in Art History (3)

Seminars will be limited to one of the following five areas. Specific topics announced each semester. May be repeated for credit but only in a different period.

I. Renaissance Art

II. 17th and 18th Century Art

III. 19th Century Art

IV. 20th Century Art

V. American Art

Prerequisites: Open only to M.A. candidates who have completed 12 credit hours of graduate art history with a B average. Permission of Department Chairman required.

7.793 Directed Research in Art History (3)

Topic arranged. Must be in one of the fields listed under 7.792 but may not be in field covered in 7.792 that semester. May not be repeated for credit.

Prerequisites: Open only to M.A. candidates who have completed 12 credit hours of graduate art history with a B average. Permission of Department Chairman required.

Biology

Professors:

EDWARD J. BREYERE
SUMNER O. BURHOE
MARTHA C. SAGER
FAI CONER SMITH, (*Chairman*)

Associate Professors:

PAUL R. CURTIS

Assistant Professors:

RICHARD R. ANDERSON
EDDIE D. LEACH
ROBERT L. STRAUTZ
ISHWAR PRADIP

Instructor:

PATRICIA BARTLETT

Adjunct Professors:

OSCAR B. HUNTER
JOSEPH C. HWANG

Professorial Lecturers:

NELLIE BERING
JOSEPH V. MICHALSKI
GEORGE CATRAVAS
ROBERT G. WILLIAMSON

UNDERGRADUATE DEGREE Bachelor of Science, Bachelor of Science emphasis Medical Technology**

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and mathematics are normally satisfied by major and related re- quirements. Consult department.	(12 hours)
	Social Science	(12 hours)

Language Requirement See page 51.

The Department requires that one language be taken through the intermediate level. However, the number of hours required varies according to the student's previous study in language and the courses selected at the University.

Recommended languages: French, German or Russian.

Departmental	MAJOR COURSES	(40 hours)
Requirements	9.110 General Biology I	(4)
	9.111 General Biology II	(4)
	9.304 Comparative Anatomy I	(4)

** Students interested in Medical Technology should consult Department for curriculum requirements other than those described in this *Catalog*.

- 9.305 Comparative Anatomy II (4)
 9.332 Cell Physiology (4)
 9.356 Genetics (4), and 16 additional hours

RELATED COURSES (26 hours)

- 15.110 and 15.111 General Chemistry I and II (8)
 15.310, 15.311, 15.320, 15.321 Organic Chemistry I and II (10)
 51.210 and 51.211 Elements of General Physics I and II (6)
 51.222 and 51.223 General Physics Laboratory I and II (2)

TOOL COURSES (6 hours)

- 41.110 and 41.111 Fundamentals of Mathematics I and II (6).

Electives These are required to complete the minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

Master of Science

Course Requirements Minimum of 32 hours of approved graduate work, 15.586 Fundamentals of Biochemistry (4) and 9.797 Master's Thesis Research (6) and Graduate Seminar, 9.700 (1).

Written Comprehensive Examination Two, selected from the fields listed below are required, one of which must be 9.006 General Biology

Other Requirements Thesis and oral defense of thesis.

Other Graduate Degrees See page 152 for information concerning requirements for the Master of Science in Science Teaching.

Graduate Comprehensive Examination Fields	9.001 Microbiology	9.004 Physiology
	9.002 Plant Sciences	9.005 Zoology
	9.003 Development Biology	9.006 General Biology
	(Embryology or Genetics)	

Master of Science in Science Teaching

The degree of M.S.S.T. is administered jointly in the College of Arts and Sciences by the departments of Science, Mathematics and Education. Students interested in the M.S.S.T. program should consult the chairman of the science department in which they take their major. The chairman of that department will assign an adviser.

Persons taking the degree in Biology must consult the Department Chairman well before applying for the comprehensive examination.

See also the section on the M.S.S.T. under the College of Arts and Sciences.

Course Requirements Minimum of 30 hours of approved graduate work with six or more hours taken in the major field. The student's undergraduate and graduate courses in the major field must total a minimum of 32 credit hours. Other requirements include:

- (a) a minimum of eight hours in a second science field,

(b) one year of college mathematics (algebra and analytic geometry or equivalent) taken either before entering the M.S.S.T. program or as non-credit courses along with the courses taken for graduate credit

(c) a course in either history or philosophy of science (3), and

(d) six hours of graduate courses in education.

A limited number of courses (not to exceed 12 hours) from the 300 to 400 level may be used toward the requirements of this degree. These courses may be selected from:

9.321	15.320-321	27.341-342	41.474
9.332	15.350-351	41.310	51.330-331
9.335	15.400-401	41.312	51.410
9.341	15.460-461	41.321	51.450-451
9.356	27.321-322	41.322	
15.310-311	27.331-332	41.440	

Written Comprehensive Examinations Three, including two fields in the natural sciences and one field in education.

UNDERGRADUATE COURSES

9.100 Human Biology (3)

Nature of living organisms and associated biological principles in relation to man. Demonstrations and televised lectures; two sessions per week, Fall and Spring.

9.110-9.111 General Biology I and II (4, 4)

A two semester course to be taken in sequence. First semester, General Biology I, the chemical background of biological principles; the utilization of these principles in the organization and maintenance of higher plants. Second Semester, General Biology II, the utilization of these biological principles in animal physiology; the genetic and reproduction mechanisms of biological systems. Two hours of lecture, four hours of laboratory.

9.304-9.305 Comparative Anatomy I and II (4, 4)

A two semester course to be taken in sequence. Inclusive program of Morphology of the living world, to include anatomy of the bacteria; the plant taxa; the invertebrates; the vertebrates. Two hours of lecture, four hours of laboratory.

Prerequisite: 9.110 and 9.111.

9.321 Plant Physiology (4)

A survey of general physiological activities of plants. Two hours of lecture, four hours of laboratory.

Prerequisite: 9.332.

9.330-9.331 Human Anatomy and Physiology I and II (4, 4)

A two semester course, to be taken in sequence. Morphologic and functional studies of mammalian systems with special reference to man; directed toward an understanding of the relationship between normal (and abnormal) function and homeostasis. Laboratory assignments to demonstrate these physiologic principles. Two hours of lecture and four hours of laboratory.

Prerequisites: 9.110 and 9.111, at least one semester of chemistry, and permission of Department Chairman.

9.332 Cell Physiology (4)

Biological principles are reexamined through physiological studies of selected microorganisms, animal and plant cells. Two hours of lecture, four hours of laboratory.

Prerequisites: 9.110, 9.111, 9.304 and 9.305, and one year of Organic Chemistry.

9.335 Animal Physiology (4)

The properties and physiological processes common to all animals, based upon a study of the organ systems. Two hours of lecture, four hours of laboratory.

Prerequisite: 9.332.

9.337 Invertebrate Zoology (Aquatic) (4)

Comparative study of aquatic invertebrates which correlates morphology and physiology in relation to the aquatic environment and evolutionary development of the taxa. Two hours of lecture and four hours of laboratory. Field trips.

Prerequisites: 8 hours of biology and 8 hours of chemistry.

9.340 Microbiology (4)

A one semester course. Course will be centered around the relations between microorganisms and human health; and related laboratory procedures. Two hours of lecture, four hours of laboratory.

Prerequisites: 9.110 and 9.111, at least one year of chemistry and permission of Department Chairman.

9.341 General Bacteriology (4)

Bacteria and their relationship to human welfare. Culture methods; principles of sterility; aseptic techniques. Two hours of lecture, four hours of laboratory.

Prerequisites: eight hours of biology and one year of Organic Chemistry.

9.350 Advanced Biological Studies (4)

Introduction to research provided for qualified students in field of special interest. Offered to meet the needs of individual students.

Prerequisites: permission of Department Chairman.

9.356 Genetics (4)

Principles of heredity and variations in animals and plants. Problems to illustrate Mendelian inheritance. Three hours of lecture and one hour of laboratory.

Prerequisites: 12 hours of Biology.

9.358 Vertebrate Embryology (4)

Mechanics of development. Formation of germ cells, fertilization, cleavage of the fertilized ovum, morphogenesis, and later development of the frog, chick, and pig. Two hours of lecture, four hours of laboratory.

Prerequisite: 12 hours of biology.

9.360 Clinical Laboratory Practice (12)

Six-month apprentice experience in laboratory of a hospital affiliated with the University in its Medical Technology Program.

Prerequisite: senior in Medical Technology. May be taken twice for credit. Hours arranged.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 700-level courses are open only to graduate students.)

9.523 Bio-Ecology (4)

Aquatic and terrestrial ecology; principles stressed through extensive field work; limnological phase with emphasis on water pollution; terrestrial phase with emphasis on synecology in various ecosystems.

Prerequisites: senior or graduate in biology.

9.524 Plant Taxonomy (4)

Study of Thallophyta, Bryophyta and vascular plants from a phylogenetic taxonomic viewpoint. Extensive field trips. Laboratory to include preparation of herbarium specimens, techniques in preserving plants and practice in use of taxonomic keys.

Prerequisites: Senior or graduate status in biology.

9.531 Animal Histology (4)

Structures and properties of cells. Microscopic study of tissues and organs of representative mammals, including man. Two hours of lecture, four hours of laboratory.

Prerequisites: senior or graduate in biology.

9.532 Parasitology (4)

A correlative course based on principles of biochemistry; physiology; anatomy and ecology. Emphasis on physiological relationship between parasite and host; clinical methods; control and prophylaxis; individual laboratory study project required.

Prerequisites: senior or graduate in biology.

9.533 Biological Designs (4)

Use of instrumentation in measuring and interpreting physiological phenomena. Two hours of lecture, four hours of laboratory.

Prerequisites: 12 hours of biology and permission of instructor.

9.535 Endocrinology (4)

The structure and function of the endocrine glands with emphasis on their control of biological processes. Two hours of lecture, four hours of laboratory.

Prerequisites: 9.335 and senior or graduate in biology.

9.541 Immunology (4)

Basic immunological principles, with special emphasis on the role of microorganisms in the study of fundamental immunological mechanisms. Laboratory techniques concerned particularly with diagnostic serological reactions. Two hours of lecture, four hours of laboratory.

Prerequisites: 9.341, one year of Organic Chemistry, and senior or graduate in biology.

9.543 Virology (4)

The nature and properties of plant, animal, and bacterial viruses. Laboratory techniques for cultivation and manipulation of viruses will be undertaken. Two hours of lecture, four hours of laboratory.

Prerequisites: 9.341, one year of Organic Chemistry, and senior or graduate in biology.

9.570 General Entomology (4)

Morphology, life history, classification, and economic importance of insects. Two hours of lecture, four hours of laboratory.

Prerequisites: senior or graduate in biology.

9.721 Advanced Plant Physiology (4)

A detailed study of biochemical mechanisms in plants including carbohydrate, lipid and protein metabolism, enzyme kinetics and chemistry of plant pigments.

Prerequisites: 9.321, one year of Organic Chemistry, and graduate status in biology.

9.730 Advanced Cell Physiology (4)

A study of physiology from a cellular point of view, emphasizing the functions of various cellular components such as chromosomes, mitochondria, membranes, nuclear, cytoplasmic interactions, and chloroplasts.

Prerequisites: 9.332 and graduate status in biology.

9.733 Radiation Biology (4)

Study of the biological aspects of ionizing radiation in relation to the whole organism, to organ systems and to cellular and subcellular structures through appropriately selected laboratory experiments.

Prerequisites: Graduate status in biology.

9.751 Advanced Genetics (4)

A consideration of salivary chromosomes, the nature of the gene, chromosomal irregularities, polyploidy, and mutations. Breeding experiments with *Drosophila* and small mammals will be conducted. Two hours of lecture and four hours of laboratory.

Prerequisites: 9.341, 9.356, and graduate in biology.

9.752 Bacterial Genetics (4)

An introduction to genetic principles applicable to bacteria and viruses. Mutation, recombination, transformation, conversion, transduction, bacteriophage, molecular genetics. Two hours of lecture, four hours of laboratory.

Prerequisites: 9.341, 9.356, and graduate in biology.

9.754 Immunogenetics (4)

The genetic control of immunologic reactions, as applied to blood groups and tissue transplants.

Prerequisites: 9.356 and graduate in biology.

9.761 Experimental Embryology (4)

Mechanics of fertilization and growth. A review of important contributions in the field of experimental embryology. Two hours of lecture and four hours of laboratory.

Prerequisites: 9.332, 9.358, and graduate in biology.

9.700 Graduate Seminar (1)

Selected topics.

9.797 Master's Thesis Research (3-6)

Chemistry

Professors:

MARY H. ALDRIDGE
ROBERT T. FOLEY
FREDERICK A. H. RICE
LEO SCHUBERT (*Chairman*)

Associate Professor:

DORIS E. HADARY
PAUL F. WATERS
LUIS A. VEGUILLA-BERDECIA

Assistant Professors:

ANN B. BRAUN
LON E. HELGEN

Research Scientists:

TAGE ASTRUP
PIETER BRAKMAN

Adjunct Professors:

BENJAMIN ALEXANDER
DANIEL BANES
EDUARD FARBER
ANDREJ MACEK
JOHN K. TAYLOR
LEO WALL

Professorial Lecturers:

WALTER BENSON
DAN F. BRADLEY
WILLIAM J. CAMPBELL

Lecturers:

ROBERT M. FRIEDENBERG
NELDON L. JARVIS
IRVING MAY
ABRAHAM SCHWEBEL

UNDERGRADUATE DEGREE

Bachelor of Science

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and Mathematics are normally satisfied by major and related requirements. Consult department.	(12 hours)
	Social Science	(12 hours)

Language Requirement The Department requires that one language be taken through the intermediate level. The number of hours required varies according to the students' prior preparation in language and the courses selected at the University.

Required Language: German or Russian.

Departmental Requirements MAJOR COURSES (43-52 hours)
15.110 and 15.111 General Chemistry I and II (8) or 15.200 Chemical Principles (4)

15.210 Qualitative Inorganic Analysis (3)
 15.211 Qualitative Inorganic Analysis Laboratory (1)
 15.310, 15.311, 15.320, 15.321 Organic Chemistry I and II (10)
 15.350 and 15.351 Quantitative Analysis (5)
 15.400 and 15.401 Physical Chemistry I and II (8)
 15.460 and 15.461 Instrumental Quantitative Analysis (5)
 15.550 Advanced Inorganic Chemistry I (3)
 15.522 Qualitative Organic Analysis (3) or 15.560 and 15.561 Biochemistry I and II (8)

RELATED COURSES (16-18 hours)

51.220-51.221 Fundamentals of General Physics I and II (8)
 51.222-51.223 General Physics Laboratory I and II (2)
 and a course in biology and a course in earth sciences.

TOOL COURSES (14 hours)

41.110 and 41.111 Fundamentals of Mathematics I and II (6)
 41.222 and 41.223 Differential and Integral Calculus I and II (8)

Electives To complete minimum of 120 hours plus non-credit physical education.
 The student is urged to consider 55.533 Computer Programming as an elective.

Other Undergraduate Degrees See page 151 for information concerning requirements for the Bachelor of Science with major in distributed sciences.

GRADUATE DEGREE

Master of Science

Course Requirements Minimum of 30 hours of approved graduate work, including 15.797 Master's Thesis Seminar (6) and 15.700 Seminar in Chemistry.
 Before this degree is awarded, the student must have completed, either in graduate or undergraduate school, two semesters of Advanced Inorganic Chemistry, two semesters of Advanced Organic Chemistry, one semester of Chemical Thermodynamics (or equivalent), and one semester of Qualitative Organic Analysis.

Written Comprehensive Examinations Two, selected from the fields listed below.

Other Requirements Proficiency examination in technical German, Russian, or French.
 Thesis and oral defense of thesis.

Other Graduate Degrees See page 152 for information concerning requirements for the Master of Science in Science Teaching.

In addition, M.S. in Information Science is available through this Department in cooperation with the Scientific and Technical Information Systems Program of the Center for Technology and Administration.

Graduate Comprehensive Examination Fields	15.001 Biochemistry	15.004 Physical Chemistry
	15.002 Organic Chemistry	15.005 Analytical Chemistry
	15.003 Inorganic and Nuclear Chemistry	

Doctor of Philosophy

General Information and Checksheet: See "A Guide to Graduate Study". Office of the Dean of Graduate Studies, August 1968.

Admission Requirements Either—

1. A 2.0 Cumulative Index in Chemistry from an A.C.S. accredited college and an acceptable grade on the Graduate Record Examination, or
2. An M.S. or M.A. in Chemistry and approval by the American University Chemistry Department Staff.

All students admitted directly from a bachelor's program must take four Placement Examinations on a published date approximately one week before general registration. Students admitted with an M.S. need not take Placement Examinations.

Course Requirements Approximately 50 hours of course credits with the remainder in 15.799, "Doctoral Dissertation Seminar" and 15.700, "Seminar in Chemistry" to total 72 credits.

See also the course requirements listed under the M.S. in Chemistry.

Advancement to Candidacy The student admitted directly from a bachelor's program is expected to file for "Advancement to Candidacy" upon completion of 18 credits. The student admitted from another University with a Master of Science degree is expected to file for "Advancement to Candidacy" upon completing nine semester hours.

Cumulative Examinations Cumulative examinations will be administered by the Department. Each field in Chemistry will schedule four such examinations each year. A minimum of six cumulative examinations must be taken. Of these, four must be in the major field and two in a minor field. A minimum of fourteen points should be accumulated for successful completion of these examination requirements.

If 14 points are not accumulated after six examinations, the candidate is required to take additional examinations. A student is considered to have met the cumulative examination requirements if he amasses the following points:

<i>Exams</i>	<i>Points</i>
6	14
7	15
8	17
9	19
10	21

A student is disqualified if at the end of the first six examinations he has not accumulated points as follows:

<i>Exam</i>	<i>Points</i>
7	8
8	11
9	14
10	17

Points are assigned as follows:

Excellent—	4 points
Pass—	3
Bare Pass—	1
Fail—	0

Dissertation The student is expected to have selected his research preceptor during or before his second year. The research should demand approximately one year of full-time effort.

Oral Examination An oral defense of thesis will be required. During this examination, the student must present at least one original research idea. He is expected to defend his research idea and develop a plan for pursuing it.

Should the research preceptor deem it appropriate, a manuscript suitable for publication in a journal will be required.

Tools of Research The student is required to pass examinations or their equivalent in two of the four following tools of research:

Russian

German

French

Computer Programming

The student is required to maintain continuous registration. See the section in this *Catalog* which refers to the "Required Graduate Study."

The fields for the cumulative examinations are to be selected from:

15.001 Biochemistry

15.002 Organic Chemistry

15.003 Inorganic and Nuclear Chemistry

15.004 Physical Chemistry

15.025 Analytical Chemistry

UNDERGRADUATE COURSES

15.100 Science of Chemistry (3)

Science and human experience. Structure of the atom, the molecule, bonds and their properties. Reactions and equilibria. Organic and biochemical processes. Kinetic molecular theory, radioactivity. Demonstrations. No laboratory. (Not for science majors.)

15.110 General Chemistry I (4)

For those with little or no chemistry background. Atomic theory, nuclear phenomena, and chemical bonding. Matter, energy, and chemical change. Solutions. Three hours of lecture, three and one-half hours of laboratory project work.

15.111 General Chemistry II (4)

Kinetics and equilibrium. Thermodynamics. Electrochemistry. The elements and their compounds treated systematically. Laboratory work includes qualitative analysis.

Prerequisite: 15.110.

15.200 Chemical Principles (4)

An advanced placement for those with good background in high school chemistry. Emphasis on the theories of general chemistry. Students must

complete the year's work with 15.210 and 15.211 Three hours of lecture, three and one-half hours of laboratory project work.

15.210 Qualitative Inorganic Analysis (3)

Inorganic solution chemistry.

Prerequisite: 15.111 or 15.200.

15.211 Qualitative Inorganic Analysis Laboratory (1)

Practice of the separation and characterization of the more familiar ions. Students who have had 15.111 need not take this course. Three hours of laboratory.

Prerequisite: 15.200.

15.310 Organic Chemistry I (3)

Systematic and theoretical treatment of aliphatic and aromatic hydrocarbons, alcohols, halides, and ethers. Ionic and free radical reactions. Stereochemistry. Must be taken concurrently with 15.311.

Prerequisite: 15.111 or 15.210.

15.311 Organic Chemistry I Laboratory (2)

Laboratory theory and practice in synthesis. Introduction to organic qualitative analysis. Must be taken concurrently with 15.310. Six hours of laboratory.

Prerequisite: 15.111 or 15.210.

15.320 Organic Chemistry II (3)

Aliphatic and aromatic acids, nitrogen compounds, carbonyls, and their derivatives. Introduction to polyfunctional compounds. Must be taken concurrently with 15.321.

Prerequisite: 15.310.

15.321 Organic Chemistry II Laboratory (2)

Synthesis of polyfunctional compounds. Qualitative organic analysis. Introduction to infrared techniques and gas chromatography. Must be taken concurrently with 15.320. Six hours of laboratory.

Prerequisite: 15.311.

15.350 Quantitative Analysis (3)

Theory of gravimetric and volumetric analysis. The balance. Statistical analysis of data. Spectrophotometry. Potentiometry.

Prerequisite: 15.320.

15.351 Quantitative Analysis Laboratory (3)

Practice of gravimetric and volumetric analysis. The use of a spectrophotometer and a pH meter. The analysis of mixtures. Project work. Must be taken concurrently with 15.350.

Prerequisite: 15.320.

15.400 Physical Chemistry I (4)

Kinetic theory, particles and fields, thermodynamics, quantum theory, Schrodinger equation solutions, molecular motions, probability, statistical mechanics, thermodynamics, thermodynamic quantities from partition functions, atomic structure, orbital functions. Three hours of lecture, four hours of laboratory a week.

Prerequisites: 15.210, 15.221, 41.223.

15.401 Physical Chemistry II (4)

Perturbation, variation, valence-bond and molecular orbital methods, structure and spectroscopy, excited states, nuclear and electron magnetic spectroscopy, intermolecular forces, kinetics, phase rule, electrochemistry, surfaces. Three hours of lecture, four hours of laboratory.

Prerequisite: 15.400.

15.460 Instrumental Quantitative Analysis (3)

Theory of optical, electroanalytical and spectrophotometric methods; emission spectrography; flame photometry; atomic absorption spectrophotometry; polarography; amperometry; coulometry; potentiometry. Analysis of errors. *Prerequisites:* 15.400, 15.350 and 15.351.

15.461 Instrumental Quantitative Analysis Laboratory (2)

Practice of optical, electroanalytical and other instrumental methods. Project work. Must be taken concurrently with 15.460. *Prerequisites:* 15.400, 15.350 and 15.351.

15.009 Glassblowing (No credit)

Demonstrations and laboratory practice in the repair, operation, and construction of glass apparatus. Permission of Department required. One hour of demonstration, three hours of laboratory. Laboratory fee, all students, \$60.00.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses are open only to graduate students.)

15.520 Advanced Organic Chemistry I (3)

Theoretical and systematic organic chemistry. Stereochemistry and electronic effects. Ionic and free radical reactions. *Prerequisites:* 15.320 and 15.401.

15.521 Advanced Organic Chemistry II (3)

Theoretical and systematic organic chemistry. Rearrangements and aromatic chemistry. Steroids. *Prerequisite:* 15.520.

15.522 Qualitative Organic Analysis (3)

Identification of organic compounds including classical procedures and modern techniques such as infrared analysis and gas chromatography. Separation and identification of organic mixtures. One hour of lecture, six hours of laboratory. *Prerequisites:* 15.320, 15.211, 15.507.

15.546 Chemical Thermodynamics (3)

Concepts of temperature, thermodynamic properties, specific heats. The Laws of Thermodynamics; their application to thermochemistry, chemical equilibrium and phase changes. *Prerequisite:* 15.401.

15.550 Advanced Inorganic Chemistry (3)

The classical atom. The quantum mechanical atom. Ionic bonding, lattice energy. Covalent bonding, valence bond approach, molecular orbital approach. Dipole—dipole interactions. Van der Waal's forces. *Prerequisite:* 15.400.

15.551 Topics in Inorganic Chemistry (3)

The bonding in metals. Transition metal chemistry including ligand field theory. Jahn Teller effect. The trans effect. Inorganic materials, boron hydrides, rare gas compounds, inclusion compounds, inorganic polymers. *Prerequisite:* 15.550.

15.556 Radiochemistry (3)

Radioactivity, isotopes, fundamental particles of matter, tracer chemistry. Instrumentation used for radioactivity. Two hours of lecture, two hours of laboratory. *Prerequisite:* 15.400.

- 15.560 Biochemistry I (4)**
The chemistry of carbohydrates, proteins, and fats. Blood and respiration. Renal function and acid-base balance. Three hours of lecture, four hours of laboratory.
Prerequisites: 15.320 and 15.401.
- 15.561 Biochemistry II (4)**
General properties of enzymes. Biological oxidation. Metabolism of carbohydrates, proteins and fats. Three hours of lecture, four hours of laboratory.
Prerequisite: 15.560.
- 15.568 Fundamentals of Biochemistry (4)**
An introductory course in biochemistry for the non-chemistry major. Three hours of lecture, four hours of laboratory.
Prerequisites: 15.320 and 9.322.
- 15.580 History of Chemistry (2)**
Development of the concepts in chemistry. Biographies of eminent chemists.
Prerequisite: 30 credits in chemistry.
- 15.600 Advanced Physical Chemistry I (3)**
Classical mechanics, quantum mechanics, spectra, M.O. theory, statistical quantum thermodynamics, and intermolecular forces.
Prerequisite: 15.401.
- 15.601 Advanced Physical Chemistry II (3)**
Chemistry of the liquid and solid states, interaction of electromagnetic waves with matter, cooperative phenomena, theory of rate processes, and irreversible thermodynamics.
Prerequisite: 15.600.
- 15.610 Advanced Inorganic Analytical Chemistry (3)**
Systematic treatment of modern analytical methods and separations.
Prerequisite: 15.460.
- 15.613 Electroanalytical Chemistry (3)**
Electrochemical theory and ionic equilibria. E M F and pH. Conductometric, oscillographic, coulometric, polarographic and amperometric analyses. Controlled potential analysis and potentiometric titrations.
Prerequisite: 15.460.
- 15.619 Inorganic Preparations (3)**
The theory and practice of inorganic preparations. Synthesis of representative compounds. One hour of lecture, six hour of laboratory.
Prerequisites: 15.460 and 15.550.
- 15.620 Chemistry of the Carbohydrates (3)**
Configurational isomerism, ring structure, and tautomeric forms. Chemistry of the uronic acids, anhydro sugars, glycosides, hexitols, cyclitols, disaccharides, and representative polysaccharides.
Prerequisites: 15.401 and 15.520.
- 15.623 Organic Preparations (3)**
Preparative methods of organic chemistry. Emphasis on techniques such as vacuum distillation, chromatography, extractions. Preparations from the original literature. One hour of lecture, six hours of laboratory.
Prerequisite: 15.520.
- 15.626 Heterocyclic Compounds (3)**
Chemistry of pyridine, pyrrole, quinoline, other heterocyclic compounds.
Prerequisite: 15.520.
- 15.630 Physical Organic Chemistry (3)**
Polar and free radical mechanisms, kinetics and stereochemistry of organic

reactions. Physical techniques for obtaining information on organic reactions
Prerequisites: 15.400 and 15.520.

15.632 High Polymer Chemistry (3)

The concepts of macromolecules and their non-homogeneous nature. The physical-organic chemistry of polymerization. Behavior and structure of polymers. Demonstrations of special laboratory techniques.
Prerequisites: 15.320 and 15.401.

15.640 Colloid and Surface Chemistry (3)

Application of physicochemical principles of colloidal systems. Solid and liquid surfaces, sorption, large molecules in solution, structure of natural and synthetic colloids.
Prerequisite: 15.401.

15.642 Chemical Kinetics (3)

Order and molecularity of reactions. Activated complex; theory for elementary reactions. Reactions in solutions and on surfaces. Complex reaction mechanisms. Non-isothermal kinetics.
Prerequisite: 15.400.

15.643 Quantum Chemistry I (3)

The eigenvalue problem. Operators and matrices. Introduction to group theory. Elementary wave mechanics. Atomic spectra. Molecular orbital theory.
Prerequisite: 15.401.

15.644 Quantum Chemistry II (3)

Interpretation of electronic, rotational, and vibrational spectra of molecules. Quantum mechanical calculations using 4CAO-MO-SCF techniques.
Prerequisite: 15.643.

15.662 Chemistry of Organic Drugs (3)

The preparation and synthetic analogues of therapeutically active substances. Salicylates, purine and pyrimidine derivatives, alkaloids, sex hormones, cardioactive glycosides and antibiotics.
Prerequisite: 15.561.

15.663 Enzyme Chemistry (3)

Classification, kinetics, chemical properties, and mechanism of action; role in metabolic processes.
Prerequisite: 15.561.

15.666 Proteins and Amino Acids (3)

Detailed treatment of the chemistry and metabolism of amino acids, polypeptides, purines, pyrimidines, and proteins.
Prerequisite: 15.561.

15.667 Chemistry of some Biologically Active Compounds (3)

Development of knowledge of the chemistry of some biologically active compounds. Detailed study of representative and important examples from the different classes of biologically active compounds.
Prerequisite: 15.561.

15.670 Electrochemistry I (3)

Double layer and electrokinetic phenomena; electrode processes; nonaqueous solvents; corrosion; electroplating; batteries; fuel cells; biochemical processes.
Prerequisite: 15.401.

15.671 Electrochemistry II (3)

Application of Electrochemistry to energy conversion processes (batteries and fuel cells), electroplating, corrosion, and detection.
Prerequisite: permission.

15.700 Seminar in Chemistry (1)

Selected topics. Preparation and presentation of a paper of professional quality.

Prerequisite: permission of Department.

15.797 Master's Thesis Seminar (3-6).

15.799 Doctoral Dissertation Seminar (3-6)

COMMUNICATION

(Formerly Journalism, Public Relations and Broadcasting)

Professors:

H. D. CRAWFORD

Associate Professors:

ROBERT O. BLANCHARD,
(Chairman)

EDWARD L. BLISS, JR.

HAMID MOWLANA

HARRY LEE

ROGER PENN

Assistant Professors:

JOSEPH M. FOLEY

DONALD T. MOORE

JACK C. SEIGLE

Adjunct Professors:

FRANK W. ANDERSON, JR.

LAWRENCE BECKERMAN

BENNY L. KASS

JOHN B. KUIPER

LAWRENCE LAURENT

BERNARD POSNER

Professorial Lecturers:

GENE BECHTEL

NICHOLAS DANILOFF

RAYMOND G. DICK

JAMES A. GUSTAFSON

JERROLD SANDLER

JIMMIE SILMAN

IRVING SPALDING

Lecturers:

DONALD G. BISHOP

PAUL H. BYERS

THOMAS GRUBISICH

MICHAEL HARRIS

CARL A. KRAMER

ELIZABETH H. MATTHEWS

MERRILL T. MCCORD

WILLIAM M. MCDOWELL

SAMUEL A. MULLINS

WILLIAM H. READ

GORDON ROTH

ELIZABETH YOUNG

UNDERGRADUATE DEGREE

Bachelor of Arts

University Requirements

Composition and Reading

(6 hours)

Physical Education

(4 units—non-credit)

Humanities

(12 hours)

Science and Mathematics

(12 hours)

Social Science

(12 hours)

Language Requirement

Through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University. In the intermediate level, the student may choose either a three-hour or four-hour track.

Departmental Requirements

JOURNALISM MAJOR

Departmental courses: a maximum of 30 hours, including 17.100, 17.101, 17.320, 17.322, 17.325 or 17.385 and three hours of departmental laboratory or internship.

BROADCASTING MAJOR

Departmental courses: a maximum of 30 hours, including 17.100, 17.101 and three hours of departmental laboratory or internship.

PUBLIC RELATIONS MAJOR

Departmental courses: a maximum of 30 hours, including 17.100, 17.101, 17.320, 17.322, 17.540, 17.541, 17.542 and three hours of departmental laboratory or internship.

MINOR OR SECOND MAJOR

12 hours or more in one area of humanities or social science, 300-level or above (area subject to approval of faculty adviser). Department recommends student seek additional hours in the one area to complete the equivalent of a second major.

Other Requirement: Seniors are required to pass a Graduate Records Examination. *Typing ability is required of all majors.*

Electives to complete minimum of 120 hours plus non-credit physical education.

Application To become a department major, the student must apply no later than the first semester of the junior year. To apply, the student obtains his or her official transcript and the "Request for Change of School and/or Major" form at the Registrar's Office; obtains the "Major Application Information" and "Degree Evaluation" forms from the Department of Communication Office; then submits the completed forms to the department office.

The ideal applicant is one who has excelled in his or her social science or humanity basic courses and who shows promise in a social science or humanity minor or second major; one who has excelled in the basic department courses and labs, particularly in relating the professional field to the social sciences or humanities; and one who is dedicated to a professional career in communication.

GRADUATE DEGREES

For highly-qualified M.A. applicants without specialization in communication, special non-credit instruction in the mechanics of communication will be arranged. Programs of study, particularly in the non-thesis option, will take account of the nature of the candidate's previous preparation.

Master of Arts in Journalism

Course Requirements Requirements include a minimum of 30 hours of approved graduate work of which 12 hours must be in advanced journalism; 9 hours in theory, including 17.760; and 3 to 6 hours in 17.797 (thesis).

Comprehensive Examinations Two are required, including one in communication theory, 17.001, and 17.004, journalism.

Other Requirements A thesis is required demonstrating ability to initiate and conduct original research in journalism.

Non-thesis Option In consultation with adviser and with approval of the Department, the student may substitute 12 hours of graduate course work in another department or school of the University in lieu of a thesis, with a total of 36 hours for the degree program.

Master of Arts in Public Relations

- Course Requirements** A minimum of 30 hours of approved graduate work is required, of which at least 9 hours must be in advanced public relations courses, 9 hours in theory, including 17.760, and 6 hours in 17.797 (thesis).
- Comprehensive Examinations** Two are required, including one in communication theory, 17.001, and 17.005, public relations.
- Other Requirements** A thesis is required demonstrating ability to initiate and conduct original research in public relations.
- Non-thesis Option** In consultation with adviser and with approval of the Department, the student may substitute 12 hours of graduate course work in another department or school of the University in lieu of a thesis with a total of 36 hours for the degree program. Two courses are required, 17.540 and 17.740, in which major research papers are required.

Master of Arts in Broadcasting and Film

- Course Requirements** Minimum of 30 hours of approved graduate work is required, of which 9 hours must be in advanced broadcasting and film; 9 hours in communication theory including 17.760; and 3 to 6 hours in 17.797.
- Comprehensive Examinations** Two are required, including one in communication theory, 17.001, and broadcasting and film, 17.003.
- Other Requirements** A thesis is required which demonstrates ability to initiate and conduct original research in broadcasting or film.
- Non-thesis Option** In certain cases, with the consent of the Department, the student may be permitted to substitute 12 hours of course work in another department of school of the University in lieu of the thesis, with a total of 36 hours for the degree program.

UNDERGRADUATE COURSES

- 17.100 Survey of Mass Communication I (3)**
Historical, social, legal, and economic aspects of the mass media; current practices and responsibilities; communication aspects of public relations and advertising.
Required of all department majors.
- 17.101 Techniques of Mass Communication (3)**
Study of the basic techniques of mass communication. Practice in various forms of writing for the mass media. (Special section provided for broadcasting majors.) Required of all department majors.
Prerequisite: 17.100.
- 17.320 News Reporting (3)**
Fundamentals of news gathering, news writing, and news judgment for all the media; study of news sources, research and interview techniques; supervised writing. Typing ability necessary.
Prerequisite: 17.101.

- 17.322 Editing (3)**
Basic instruction and practice in the editing process for all the media, including copy editing and editorial judgment.
Prerequisite: 17.320.
- 17.325 Feature Writing (3)**
Study of various types of feature articles for newspapers, syndicates, magazines, and specialized publications; practice in research, interviewing, writing, revision and the marketing of articles.
Prerequisite: 17.322.
- 17.330 Newspaper Laboratory (1)**
For students working on the student newspaper, *The Eagle*. May be repeated twice.
Prerequisite: permission of Department.
- 17.331 Magazine Laboratory (1)**
For students working on the student magazine, *American*. May be repeated twice.
Prerequisite: permission of Department.
- 17.332 Yearbook Laboratory (1)**
For students working on the student yearbook, *The Talon*. May be repeated twice.
Prerequisite: permission of Department.
- 17.333 Broadcasting Laboratory (1)**
For students working in University radio, television and film facilities. May be repeated twice.
Prerequisite: permission of Department.
- 17.342 Magazine Journalism (3)**
Survey of contemporary periodicals, their backgrounds, trends, functions, staff organization, free lance sources, editorial policies and practices.
Prerequisite: 17.100.
- 17.343 Photography (3)**
Study of photographic requirements and professional techniques for newspapers, magazines, syndicates, and specialized publications. Picture planning and taking; selecting and editing photographs for publication.
Prerequisite: 17.101.
- 17.344 Business Journalism (3)**
Survey of policies and practices of newspapers and periodicals devoted to business and industry, including association publications, employee publications, house organs, and newsletters.
Prerequisite: 17.101.
- 17.345 Community Journalism (3)**
Study and discussion of special problems and practices of community, suburban, and special-interest dailies and weeklies.
Prerequisite: 17.101.
- 17.346 Scientific and Technical Journalism (3)**
Study and practice of the basic techniques of writing and editing scientific and technical material for both the general audience and the specialist.
Prerequisite: permission of Department.
- 17.381 Broadcasting Procedures (3)**
Study and practice in the adaptation of presentational methods and materials to the requirements of radio and television. Laboratory.
Prerequisite: permission of Department.

- 17.382 Writing for Broadcasting (3)**
Principles and practice of writing for the broadcast and film media. Preparation of copy for the basic program types.
Prerequisite: 17.101.
- 17.383 Radio Production and Direction (3)**
Study and application of the techniques of radio production and direction, with laboratory.
Prerequisite: 17.381.
- 17.384 TV Studio Operations (3)**
Principles and practice in the operation of television studio equipment, with laboratory.
Prerequisite: 17.381.
- 17.385 TV-Radio News (3)**
Study and practice in the special application of news writing and editing to the broadcasting media, including use of wire copy and tape recorders in producing newscasts.
Prerequisites: 17.320, 17.381 and permission of current instructor.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 700-level courses are open only to graduate students.)

COMMUNICATION THEORY

- 17.500 Communication History (3)**
Evolution and development of newspapers, magazines, radio, television, and motion pictures as communication media. Influence of historic backgrounds on contemporary ethics and practices.
Prerequisite: permission of Department.
- 17.501 Communication Law (3)**
Current legal problems and theory of controls in journalism, visual communication, television and radio. Analysis of libel suits, copyrights, infringements. No previous knowledge of law required.
Prerequisite: permission of Department.
- 17.503 Mass Media in Society (3)**
The role of newspapers, magazines, broadcasts, motion pictures, and other mass media in society and their impact on world affairs.
Prerequisite: permission of Department.
- 17.507 Freedom of Information (3)**
Investigation of access and barriers to information at local, state, national and international levels. Information access rights and responsibilities of communication media. Individual research projects.
Prerequisite: permission of Department.
- 17.710 Seminar in Public Affairs (3)**
Intensive study of public affairs and current events in the news, with special attention to the journalistic problems of news coverage in Washington; guest lecturers, discussion, and research papers.
Prerequisite: permission of Department.
- 17.720 Seminar in Journalism (3)**
Specialized and current problems in journalism, with emphasis on individual research projects. Topic of the seminar varies.
Prerequisite: permission of Department.

- 17.760 Introduction to Graduate Research (3)**
Development, analysis, and use of research methods for communication media, including audience, communicator, and content measurement techniques. *Required of all graduate students.*
- 17.782 Broadcasting in the Public Interest (3)**
Analysis of the responsibilities of the broadcaster in terms of "public interest, convenience, and necessity"; comparison of U. S. and foreign programming.
Prerequisite: permission of Department.

Journalism

- 17.520 Advanced Editing (3)**
Advanced training to develop editorial judgment and skills in processing material for publication; study of problems and practices in making assignments, handling departments, and dealing with copy; 4-hour laboratory.
Prerequisite: 17.322 or graduate standing.
- 17.521 Editorial Writing (3)**
Editorial page policies and practices; supervised writing of various types of editorials on current subjects; analysis of editorial columns and interpretive reviews.
Prerequisite: 17.322.
- 17.523 Advanced Photography (3)**
Advanced study of photography, especially for publication purposes, including use of cameras, darkrooms, printing, and picture editing.
Prerequisite: 17.343, permission of instructor.
- 17.524 Advanced News Reporting (3)**
Advanced training in writing news for publication, with emphasis on specialized areas of coverage; students cover assignments in selected fields for one full day a week.
Prerequisite: permission of Department.
- 17.526 Advanced Feature Writing (3)**
Principles and methods of writing feature stories for publication. Individual attention to problems. Students submit articles for publication.
Prerequisite: 17.325.
- 17.527 Advanced Scientific and Technical Journalism (3)**
Advanced study and practice of writing and editing scientific and technical manuals, reports, proposals, articles, and films.
Prerequisite: 17.346.
- 17.531 Foreign Press (3)**
History and development of press and broadcasting systems in foreign countries. Comparison with the systems and problems in the United States.
Prerequisite: Permission of Department.
- 17.532 Publication Layout and Design (3)**
Study of layout, typography, design, and printing in the planning and production of newspapers, magazines, books, brochures, and folders.
Prerequisite: permission of Department.
- 17.536 Government News Reporting (3)**
Special problems in covering the White House, Congress, U. S. Departments, Agencies and Courts, utilizing facilities in Washington as a laboratory for intensive study and writing practice for one full day a week.
Prerequisite: 17.320, permission of the Department.

Public Relations

17.540 Principles of Public Relations (3)

Historical development of public relations; economic and social factors in relations between publics and media in the formation of public opinion. Case studies of current practices.

Prerequisite: 17.320.

17.541 Publicity Writing (3)

Writing for public relations, publicity, and promotional programs; preparation of news releases, articles for magazines and trade journals, broadcasting scripts and promotional booklets.

Prerequisites: 17.320 and 17.540.

17.542 Promotional Campaigns (3)

Case studies of promotional methods of business, government, and social organizations; development of a promotional campaign by each student.

Prerequisite: 17.540.

17.543 Public Relations Overseas (3)

Problems of public relations in international trade and diplomacy; case studies of American business public relations practices in other countries; analysis of U.S.I.A. programs.

Prerequisite: permission of Department.

17.544 Public Relations in Government (3)

Analysis of objectives and problems of governmental agencies in their relations with various publics; case studies of public information programs.

Prerequisite: 17.540.

17.545 Public Relations in Business (3)

Case studies in business and industrial relationships with various publics, such as labor, trade, dealer, customer, stockholder, and community.

Prerequisite: 17.540.

17.740 Seminar in Public Relations (3)

Special problems in the formulation of policies for long-range public relations programs. Emphasis on individual research projects.

Prerequisite: permission of Department.

Broadcasting

17.528 Advanced TV-Radio News (3)

Advanced training in writing, editing, and producing newscasts for the broadcasting media, with emphasis on the problems of broadcast news analysis and commentary.

Prerequisite: 17.385.

17.546 Audio-Visual Communication (3)

Study of the problems of picturing abstract ideas and information through exhibits, graphics, cinema, television, and other audio-visual arts for advertising, education, and public relations.

Prerequisite: permission of Department.

17.558 History of Motion Pictures (3)

The historical development of the motion picture as an art form from its earliest development as a laboratory curiosity until the present day.

17.561 Advanced Writing for Broadcasting (3)

Practice in writing documentary and dramatic programs for radio, television, and films.

Prerequisite: 17.382.

- 17.581 Teaching With Television and Radio (3)**
Theory and practice in the adaptation and utilization of educational materials for the broadcast media.
Prerequisite: permission of the Department.
- 17.583 Film Production (3)**
A comprehensive introduction to the criticism, analysis, and production techniques of films for motion pictures and television.
- 17.584 TV Production and Direction I (3)**
Theory and application of the basic principles and techniques of television production and direction.
Prerequisite: 17.384.
- 17.585 TV Production and Direction II (3)**
Advanced training in the longer, more complex and more sophisticated television programs.
Prerequisite: 17.584.
- 17.586 TV Production Laboratory (3)**
Intensive creative and experimental work in the writing, designing, or performing aspects of TV production.
Prerequisite: permission of Department.
- 17.588 Radio-TV Programming (3)**
Study and application of the principles of planning radio and television programs and program schedules.
Prerequisite: 17.381.
- 17.589 Seminar in Broadcasting (3)**
Study in depth of certain areas and problems in broadcasting which are not covered in the regular sequence of courses. Topics will vary from semester to semester. May be repeated for credit when topics vary.
Prerequisite: permission of Department.

Thesis Seminar

- 17.797 Master's Thesis Seminar (3-6)**
This seminar is for those students starting theses in journalism, public relations or broadcasting.

Internship

- 17.591 Internship (3)**
Supervised study of communication practices at selected organizations. Sponsoring agencies provide a scholarship in the amount of the student's tuition for the internship. Open to students in the upper half of their junior or senior class and/or graduate students, by application one month prior to registration.

Earth Sciences

Admission to the B.S. and M.S. programs in Earth Sciences was discontinued after the fall registration of 1966. Students admitted prior to that date and who will be unable to complete their degree requirements by June, 1970, should consult the Chairman of the Department of Earth Sciences.

Professors:

JOHN W. FREY (*Emeritus*)

MATTHEW F. NORTON (*Chairman*)

Assistant Professor:

EDWARD T. BUTLER, JR.

Adjunct Professors:

PAUL S. BAUER

IRVING A. BREGER

Professorial Lecturer:

JOHN K. HARTSOCK

Lecturer:

CHARLES S. CURTIS

UNDERGRADUATE DEGREE Bachelor of Science

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and Mathematics are normally satisfied by major and related requirements. Consult department.	(12 hours)
	Social Science	(12 hours)

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Recommended languages: French, German or Russian. Students who already have an intermediate-level knowledge of one of these foreign languages upon entering the University are strongly urged to study a second appropriate language.

Departmental Requirements MAJOR COURSES (40 hours)

All students are required to complete the following courses (core requirements in Earth Sciences) with grades of C or better:

27.101 and 27.102 Principles of Earth Sciences I and II (8)

27.321 and 27.322 Biological Earth Sciences I and II (8)

27.331 and 27.332 Chemical Earth Sciences I and II (8)

27.341 and 27.342 Physical Earth Sciences I and II (8)

27.401 Senior Seminar in Earth Sciences (3)

27.472 Field Methods (4)

27.500 Literature of Earth Sciences (1)

All students whose cumulative academic index allows it (1.75 or better) are strongly urged to undertake an Individual Research Project 27.490 for three hours credit in the senior year.

RELATED COURSES (16-18 hours)

15.110-15.111 General Chemistry I and II (8) or 15.200 Chemical Principles (4) and either 51.210-51.211 Elements of General Physics I and II (6) or 51.220-51.221 Fundamentals of General Physics I and II (8) and 51.222-51.223 General Physics Laboratory (2).

General Biology 9.110 and 9.111 (8) is strongly recommended.

Other additional related courses may be advisable for certain areas of interest within Earth Sciences.

TOOL COURSES (8-14 hours)

Mathematics through 41.223 Differential and Integral Calculus II. Usual sequence: 41.110-41.111 Fundamentals of Mathematics I and II (6), 41.222-41.223 Differential and Integral Calculus I and II (8).

Electives To complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREE

Master of Science

Course Requirement Minimum of 30 hours of approved graduate work, including 27.797 Master's Thesis Seminar (3 or 6).

Written Comprehensive Examinations Two, including 27.001 General Earth Sciences, and one specialized field.

Other Requirements Reading proficiency in French, German, or Russian as evidenced (1) by satisfactory completion of an intermediate level course, or (2) by a proficiency examination. Thesis and oral defense of thesis.

Graduate Comprehensive Examinations Fields **CORE FIELD**
27.001 General Earth Sciences.

SPECIALIZED FIELDS

27.002 Earth Sciences: Biological 27.004 Earth Sciences: Physical
27.003 Earth Sciences: Chemical

Other Graduate Degrees See page 152 for information concerning requirements for the Master of Science in Science Teaching.

UNDERGRADUATE COURSES

27.100 Earth Sciences (3)

Survey of earth features and processes: time, weather, climate, the oceans, minerals, rocks, landforms, glaciers, volcanoes, earthquakes, origin and development of life, geologic history, resources.

27.101 Principles of Earth Sciences I (4)

Lecture identical with 27.100; laboratory: geographic grid, construction and interpretation of planimetric, topographic, and geologic maps, weather analysis, navigation, identification of minerals, rocks, and fossils. Three hours lecture, four hours laboratory, field trip.

- 27.102 Principles of Earth Sciences II (4)**
Geologic history of North America: sedimentation stratigraphy, and structural geology; map and aerial photograph interpretation; chemical and microscopic identification of minerals and rocks; field mapping. Two hours lecture, four hours laboratory, two field trips.
Prerequisites: 27.101 or 27.100 and 27.103, or 27.150.
- 27.103 Principles of Earth Sciences I Laboratory (1)**
Those who have taken 27.100 may register for this laboratory in order to complete the equivalent of 27.101 and qualify to enter 27.102.
- 27.150 Basic Geography (4)**
Fundamental principles of physical geography: earth origin, position, and motion; maps; weather; climate; landforms; oceans; resources—their use and conservation; natural limits on development. Three hours lecture, two hours laboratory.
Prerequisite: permission, except for students in the School of International Service.
- 27.321 Biological Earth Sciences I (4)**
Principles of classification of living and fossil organisms compared; biostratigraphy and evolution; origin and occurrence of fossils. Illustrated by select vertebrate and invertebrate taxonomic groups. Two hours lecture, four hours laboratory.
Prerequisite: 27.102 or permission.
- 27.322 Biological Earth Sciences II (4)**
A study of the evolution of the invertebrate phyla as represented by fossils. Two hours lecture, four hours laboratory.
Prerequisite: 27.321.
- 27.331 Chemical Earth Sciences I (4)**
Geochemical concepts and procedures; chemical and crystallographic classification and identification of minerals; principles of igneous rock classification; the petrographic microscope and X-rays in mineral identification. Two hours lecture, four hours laboratory.
Prerequisites: 27.102 and 15.111 or 15.200.
- 27.332 Chemical Earth Sciences II (4)**
Chemistry of silicate melts, sedimentation, and metamorphism; hand specimen and microscope identification of igneous, sedimentary, and metamorphic rocks and ores; isotope geochronology; geothermometry; mineral deposits. Two hours lecture, four hours laboratory.
Prerequisite: 27.321.
- 27.341 Physical Earth Sciences I (4)**
Interpretation of gravity, heat flow, electric, magnetic, and seismic data; wave motion in earth processes; atmospheric physics; physics of sedimentation and geomorphology; experimental rock deformation. Two hours lecture, four hours laboratory.
Prerequisites: 27.102 and 51.211 or 51.221 and 51.222, 51.223.
- 27.342 Physical Earth Sciences II (4)**
Identification, classification, analysis in orthographic and stereographic projections, and significance of earth structures; structural petrology; map interpretation and block diagrams. Two hours lecture, four hours laboratory.
Prerequisite: 27.341.
- 27.401 Senior Undergraduate Seminar (3)**
Required of all senior majors in the Department of Earth Sciences. Consideration of selected cross-disciplinary problems in earth sciences.
Prerequisite: permission.

27.472 Field Methods (4)

Field problems in earth sciences; map construction and mechanics of mapping; two field studies with formal reports and maps. Average of eight hours per week in the field.

Prerequisites or Corequisites: 27.322, 27.332, and 27.342.

ADVANCED COURSES

(500-level courses are open to graduate students and qualified advanced undergraduates with permission; 600- and 700-level courses are open only to graduate students.)

27.500 Literature of Earth Sciences (1)

Survey of reference, journal, and source literature; styles of scientific report writing and scientific illustration.

27.501 Analytical Geology (3)

Study of the origin, materials, and processes of the lithosphere, atmosphere, hydrosphere, and biosphere, with emphasis on identification and analysis of geologic materials and forms. Two hours lecture, two hours laboratory.

Prerequisite: permission.

27.502 Earth Sciences Materials (3)

Minerals, rocks, and fossils examined by petrographic and binocular microscopes, blowpipe, wet chemical tests. Two hours lecture, two hours laboratory. *Prerequisite:* permission.

27.506 Oceanography (3)

Survey of the physics, chemistry and biology of the oceans; physiography and geology of ocean basins. *Prerequisite:* permission.

27.560 Regional Geography (3)

Location, physical subdivisions, climatic factors, physical control of boundaries, transportation, and other geographic features of a selected major area. May be repeated for credit, if a different area is the topic.

Prerequisite: 27.100, 27.101 or 27.150.

27.600 Advanced Topics in Earth Sciences (3)

Study of a selected special topic or topic in Earth Sciences. May be repeated for credit, if a different topic is covered.

Prerequisite: permission.

27.621 Advanced Biological Earth Sciences I (4)

The effects of environment on the morphology and distribution of living and fossil organisms.

Prerequisite: permission.

27.622 Advanced Biological Earth Sciences II (4)

The theory and practical use of fossils in stratigraphy.

Prerequisite: 27.621.

27.631 Advanced Chemical Earth Sciences I (4)

Crystal growth and the external and internal symmetry of crystals as revealed by goniometric, optical, and X-ray analyses; crystal chemistry; geometric crystallography.

Prerequisite: permission.

27.632 Advanced Chemical Earth Sciences II (4)

Principles of chemical equilibrium applied to igneous and metamorphic rocks; origin, evolution, and crystallization of magmas; environment and facies of metamorphism; microscopic analysis of rocks.

Prerequisite: 27.631.

27.641 Advanced Physical Earth Sciences I (4)

Physical bases of gravity, heat flow, electric, magnetic, and seismic phenomena and measurements. Observations and case studies.

Prerequisite: permission.

27.642 Advanced Physical Earth Sciences II (4)

Physical bases of dynamic meteorology and oceanography; theory of atmospheric and oceanic tropospheric and stratospheric circulation; waves and tides.

Prerequisite: 27.641 or permission.

27.700 Seminar in Earth Sciences (3)

Selected topics in earth sciences; preparation and presentation of a technical paper of professional quality. May be repeated for credit, if different topics are covered.

Prerequisite: permission.

27.797 Master's Thesis Seminar (3-6)

Economics

Professors:

W. DONALD BOWLES (*Dean of
College of Arts and Sciences*)
ERNST CORRELL (*Emeritus*)
WARREN S. HUNSBERGER
FRITZ KARL MANN (*Emeritus*)
SIMON NAIDEL (*Emeritus*)
FRANK M. TAMAGNA

Associate Professors:

PAMELA H. KACSER
CYNTHIA TAFT MORRIS
VITO TANZI
JAMES H. WEAVER (*Chairman*)
CHARLES K. WILBER
Assistant Professor:
NANCY BARRETT

Instructors:

W. MICHAEL BAILEY
FRITS VAN BEEK
GAIL ELLIS HUH

Adjunct Professors:

EDWARD L. ALLEN
NICHOLAS ANAGNOS

Professorial Lecturers:

ARTHUR ASHBROOK
GEORGE N. ECKLAND

UNDERGRADUATE DEGREE Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and Mathematics	(12 hours)

Recommended course:

41.100 Survey of Mathematics I
or 41.110
Fundamentals of Mathematics I
Social Sciences are normally satisfied
by major and related requirements. (12 hours)

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Departmental Requirements	MAJOR COURSES	(30 hours)
	<i>Substantive Courses</i>	(27 hours)

Required Courses (18 hours)

- 19.100 Introduction to Economics I (3)
- 19.101 Introduction to Economics II (3)
- 19.300 Intermediate Economic Analysis: Price (3)
- 19.301 Intermediate Economic Analysis: Income (3)
- 19.303 Landmarks of Economic Theory (3)
- 19.314 Senior Seminar (3)

Elective Courses (9 hours)

Nine hours of course work chosen from departmental offerings.

Quantitative Courses (6 hours)

69.202 Basic Statistics is required. Students are urged to take 19.305 Introduction to Quantitative Economics (3).

RELATED COURSES (12 hours)

Advanced work selected from the following fields, with not more than 9 hours in any one: anthropology, business administration, education, government, history, international relations, mathematics, philosophy, psychology, public administration, sociology.

Note: Grade of C or better is required in all major tool and related courses. Students planning to continue on to graduate work in economics are advised to take mathematics as a related field.

TOOL COURSES

See quantitative courses above.

Electives Students majoring in economics are required to complete minimum of 120 hours plus non-credit physical education. It is suggested that the entire last semester of the senior year be composed of electives. All 500-level courses in the department are open to undergraduates with the necessary prerequisites. In general a student should not use his electives entirely in his own field, but should strengthen his overall educational program. At least 18 hours of electives must be at the 300-level or above. For some purposes, 10.306-307 Accounting I and II are useful electives.

Admission See page 24.

The Graduate Record Examination is recommended. (In general an overall grade point average of B (2.0) in the last two years of undergraduate work is required.)

Course Requirements Minimum of 30 hours of approved graduate work is required. This must include Price Theory 19.500, Income Theory 19.501, Statistics 69.514, and either 19.797 Master's Thesis Seminar or two non-thesis seminars.

Doctor of Philosophy

Admission See page 36.

The Graduate Record Examination is recommended.

Course Requirements See page 38.

Minimum of 72 hours of approved graduate work is required, including 19.799 Doctoral Dissertation Seminar (up to 24 hours). Students enter-

ing the Ph.D. program with MA degrees earned elsewhere must complete 30 hours of course work in residence plus 12 hours of dissertation credit.

- Comprehensive Examinations**
1. An oral examination on general knowledge of economics is required after 27 hours of graduate credit for students who enter the Ph.D. program without an M.A. For students with an M.A., this examination will be taken during the first year of Ph.D. work.
 2. A minimum of four written examinations, including one in contemporary economic theory and its development (given in two parts—Price and Income), one in history of economic development, and two elective fields are required. One elective field may be fulfilled by satisfactory completion (better than B) of six hours of course work. The written examinations must be taken within one year of completion of residence requirements.
 3. An oral examination on subject matter contained in written examinations immediately after comprehensive examinations is required.
 4. An M.A. degree will be conferred upon satisfactory completion of course work, tool requirements and Ph.D. comprehensives.
 5. Oral examination is required on the dissertation.

Other Requirements All students must complete a graduate course in the history of economic thought (19.701). In addition, two workshops (19.791) must be completed. New students are advised to complete a year of basic statistics and a year of calculus before registration in the graduate program.

Tool of Research Every student must successfully complete the following courses or their equivalent in satisfaction of the tool of research requirement:

19.521 Quantitative Economic Analysis

19.523 Econometrics I

69.515 Methodology II: Regression Analysis

In certain cases the student may be required to take a foreign language as the tool of research.

- Graduate Comprehensive Examination Fields**
- 19.01A Contemporary Economic Theory: General (required of M.A. students)
 - 19.01B Contemporary Economic Theory: Price (required of Ph.D. students)
 - 19.01C Contemporary Economic Theory: Income (required of Ph.D. students)
 - 19.002 History of Economic Thought
 - 19.003 Economic History of Europe
 - 19.004 Economic History of the United States
 - 19.005 History of Economic Development (required of Ph.D. students)
 - 19.007 Economic Growth and Development
 - 19.07A Economic Development Policy (not open to students in Dept. of Economics)
 - 19.008 Labor Economics
 - 19.009 International Economics
 - 19.09A International Economic Policy (not open to students in Dept. of Economics)

- 19.011 Comparative Economic Systems and Soviet-type Economies
- 19.013 Monetary Economics
- 19.014 Public Finance and Fiscal Policy
- 19.016 Mathematical Economics
- 19.017 Econometrics
- 19.018 Quantitative Methods in Economics
(open only to M.A. candidates)

Major in Business Economics The Department of Economics and the School of Business Administration have coordinated a new major called a Major in Business and Economics. The major is open to a student in the Department of Economics who takes the following courses in Economics:

- 19.100 Introduction to Economics I
- 19.101 Introduction to Economics II
- 19.300 Intermediate Economic Analysis: Price
- 19.301 Intermediate Economic Analysis: Income
- 19.303 Landmarks of Economic Theory
- 19.305 Introduction to Quantitative Economics
- 69.202 Business Statistics

In addition, the student would be required to take the following courses in the School of Business Administration:

- 10.306 Introductory Accounting I
- 10.307 Introductory Accounting II
- 10.201 Business Law I
- 10.465 Business Finance I
- 11.300 Marketing I
- 10.456 Principles of Management

By taking this joint major, a student may receive a Master's Degree in either Business Administration or Economics with one year of graduate study beyond the B.A. degree.

See also this degree program under the *School of Business Administration* in this *Catalog*.

Honors THE SIMON NAIDEL prize of \$50 is awarded annually to the graduate student in Economics who has written the most outstanding comprehensive examination, as judged by the faculty of the Department of Economics.

THE FRANK TAMAGNA prize of \$100 is awarded annually to the outstanding student in monetary economics as judged by those professors teaching monetary economics.

UNDERGRADUATE COURSES

19.100 Introduction to Economics I (3)

Institutional framework. Fundamental aggregative relationships of income, consumption, investment. Includes resources, economic growth, public and private finance, national income, business cycles, national economic policy. Offered every semester.

19.101 Introduction to Economics II (3)

Elementary theory of price, forms of imperfect competition, income distribution, public policy, international economics, economic development, comparative economic systems.

Prerequisite: 19.100. Offered every semester.

- 19.300 Intermediate Economic Analysis: Price (3)**
Theory of relative prices of commodities and productive services under perfect and imperfect competition. The theory of the firm and the theory of consumer demand.
Prerequisite: 19.101. Offered Fall and Spring Semesters.
- 19.301 Intermediate Economic Analysis: Income (3)**
Basic concepts and theory of income, employment and economic growth.
Prerequisite: 19.101. Offered Fall and Spring Semester.
- 19.303 Landmarks of Economic Theory (3)**
History of the development of economic thought as exemplified by the writings of Smith, Ricardo, Mill, Marx, Marshal, Veblen, Keynes; historical settings in which their ideas developed.
Prerequisite: 19.101. Offered Fall semester.
- 19.304 Labor Economics (3)**
Labor markets and wage structure. Collective bargaining. Wage theories and policies. Labor productivity, real wages, income, employment, unemployment, comparative labor problems.
Prerequisite: 19.101. Offered Spring semester.
- 19.305 Introduction to Quantitative Economics (3)**
Selected topics from analytical geometry, calculus, linear algebra statistics, computers, and their application to problems in economic research and analysis.
Prerequisites: 41.100 and 19.101. Offered Fall and Spring semester.
- 19.306 Money and Banking (3)**
Role of money and credit in the economy. The structure of the money market. Structure and operations of commercial banks. The Federal Reserve System and instruments and processes of monetary policy. Introduction to monetary theory.
Prerequisite: 19.101. Offered every semester.
- 19.307 Economic Development (3)**
Theories of Economic Growth (Classical, Marxian, Schumpeterian, Keynesian, etc.). Simple growth models, agriculture, population problems, development planning.
Prerequisite: 19.101. Offered Fall semester.
- 19.308 The Economic Development of the United States (3)**
A study of long term trends in the U.S. economy. The transplantation of economic institutions from Western Europe, the basic pattern of development, trends in productivity, wages, prices, national income, savings, investment, and capital formation.
Prerequisite: 19.101. Offered Spring semester.
- 19.309 Economics of Public Finance (3)**
Principles of budgeting, public spending, debt management, fiscal policy. Comparative survey of fiscal institutions in the U.S. and abroad.
Prerequisite: 19.101.
- 19.311 International Economics (3)**
In Fall semester mainly for economics majors. Stresses theory of international trade, international payments, factor movements, foreign exchange and the international monetary system. In Spring semester mainly for students not majoring in economics. Less theoretical than Fall semester and more concerned with current trends and policy issues.
Prerequisite: 19.101.
- 19.312 Comparative Economic Systems (3)**
Principles governing pricing, income distribution, productivity, investment,

economic stability, growth under various forms of social, political, and economic organization.

Prerequisite: 19.101. Offered Spring semester.

19.313 Current Economic Problems (3)

Discussion of the most important economic problems facing the United States today. Includes economic aspects of domestic and international problems, i.e. poverty, urban problems, unemployment, gold, revolutions, etc.

Prerequisite: 19.101.

19.314 Senior Seminar (3)

This course is designed to encourage all economics majors to do independent research during their senior year. Topics will be chosen by professors and students involved.

Prerequisite: Senior standing in economics.

ADVANCED COURSES

(500-level courses are open to graduate students and qualified advanced undergraduates; 700-level courses are open only to graduate students.)

GENERAL ECONOMIC THEORY

19.500 Price Theory (3)

This course will present the necessary elements of price theory for graduate students enrolled in the terminal M.A. program.

Prerequisite: 19.101.

19.501 Income Theory (3)

This course will present the necessary elements of income theory for graduate students enrolled in the terminal M.A. program.

Prerequisite: 19.101.

19.701 Economic Thought I (3)

The major figures in the history of economic thought in terms of both their general, social and economic thought and the tools of analysis they created.

Prerequisites: 19.300, 19.301, 19.303. Offered Fall semester.

19.702 Economic Thought II (3)

Special topics in the history of economic thought, with emphasis on topics rather than men.

Prerequisite: 19.701.

19.703 Price Analysis I: Price and Production (3)

The theory of demand. The theory of production and distribution. The theory of supply.

Prerequisite: 19.300. Offered Fall semester.

19.704 Price Analysis II: Income Distribution (3)

Market equilibrium. General equilibrium. Welfare economics. Models in imperfect competition. Optimization over time.

Prerequisite: 19.703. Offered Spring semester.

19.705 Income Theory I (3)

The Keynesian model of income determination. Detailed study of consumption, investment and interest rate theories. The Keynesian and Classical systems compared.

Prerequisites: 19.301 and 19.306 or permission. Offered Fall semester.

19.706 Income Theory II (3)

Theories of aggregate income distribution. Theories of inflation. Dynamic

welfare economies will be developed and extensively utilized to analyze models of pure capitalism, market socialism, and central planning.

Prerequisite: 19.300.

MONEY, CREDIT AND BANKING

19.531 Financial Markets in Advanced Economies (3)

Nature and functions of money and capital markets, their sectors and their interrelations. Institutions, instruments and operations. Sources and uses of funds; debt and equity financing. The structure of interest and its function in market relations. Public debt management and effects on market liquidity. Processes of monetary policy and diffusion effects of Federal Reserve operations. Comparative references to leading foreign markets.

Prerequisite: 19.306. Offered Spring semester of alternate years.

19.532 Financial Markets in Developing Economies (3)

Formative factors of money and capital markets. The role of the banking system in market formation. Official development banks and private financial institutions and their relations to economic planning. The impact of fiscal and monetary policy on sources and uses of funds. Development programs, inflation and monetary stabilization.

Prerequisite: 19.306. Offered Spring semester of alternate years.

19.731 Monetary Theory (3)

Money and credit as factors influencing income, prices, employment and balance of payments. Behavior patterns in demand for commodities, money and securities, concepts, theories and functions of interest rate and saving and investment processes and income determination. Quantity and velocity in monetary equations and monetary models. Time and liquidity preference and role of financial intermediaries in the monetary process.

Prerequisite: 19.306. Offered Fall semester.

19.732 Theory and Management of Central Banking (3)

Evolution of central banking and comparative institutional analysis. Relations to government and process of monetary policy formulation. Quantitative and qualitative instruments of monetary policy. The role of monetary policy in internal economic policy and international economic relations.

Prerequisite: 19.731. Offered Fall semester.

PUBLIC FINANCE

19.541 Public Finance II (3)

Government financing and fiscal control. Fiscal policies and their welfare implications. Fiscal policy to advance economic stabilization and full employment.

Prerequisites: 19.301 and 19.306.

19.542 Public Finance II (3)

Discussion of selected problems of fiscal theory: compensatory finance, fiscal dynamics, debt policy, etc.

Prerequisite: 19.541.

INTERNATIONAL ECONOMICS

19.533 International Finance and Capital Movements (3)

Balance of payments accounts, modern theories concerning interrelations between price level, balance of payments, and capital movements. Foreign exchange markets, foreign investments and capital movements. International financial organizations. The international monetary system and its reform.

Prerequisites: 19.306 and 19.311. Offered Spring semester of alternate years.

19.751 International Economic Theory (3)

Theory of international specialization, world trade and development, com-

mercial policy, international economic relations. Balance of payments.

Prerequisites: 19.300 and 19.301. Offered Fall semester.

19.752 Current International Economic Problems (3)

U.S. balance of payments problems, international economic institutions, history of the international economy since 1914, current international economic problems, *i.e.* East-West trade, regional groupings, foreign aid.

Prerequisite: 19.311 or 19.751. Offered Spring semester.

LABOR ECONOMICS

19.572 History of the U.S. Labor Movement (3)

Causes and results of organized efforts to regulate the conditions of work and the well-being of workers. Political, economic objectives, social problems surrounding the labor movement.

Prerequisite: 19.304.

19.573 History of the European Labor Movement (3)

Development of the labor movement in Europe. Comparative historical view of trade union ideologies, objectives, structure, methods. International trade union federations.

Prerequisite: 19.304.

19.574 Comparative Labor Relations (3)

Comparative analysis of the status of labor relations in selected foreign industrialized and unindustrialized countries. Includes labor-management relations, labor-government relations, political parties and labor legislation.

Prerequisite: 19.304.

19.575 Labor Statistics (3)

Critical analysis of information on occupational descriptions and classifications, industrial classifications, industrial censuses, employment, payrolls, absenteeism, and unemployment. Wage rates, union scales, vacations, retirement. Prices and real wages. Sources, methods of collection, analysis and presentation.

Prerequisite: 19.304.

19.771 Labor Economics: Theory (3)

Critical evaluation of contemporary wage and employment theory. Analysis of trends affecting the position of labor in modern and traditional societies and their relations to the determination of wages, hours, working conditions. Strategy of collective bargaining. Role of productivity, labor mobility, relative factor prices and industrial organization on wage determination in the firm and in the economy.

Prerequisites: 19.300, 19.301 and 19.304. Offered Fall semester.

19.772 Current Labor Problems (3)

Application of economic theory to the analysis of current labor problems, domestic and foreign. Problems include wage policy and wage differentials, manpower policy, poverty, unemployment and underemployment, discrimination, productivity, industrialization, and union policies.

Prerequisite: 19.771.

SEMINARS

19.780 Seminar in Monetary Economics (3)

Economic and monetary trends and their interrelationship. Federal Reserve policies and government financial operations and their effects on money and capital markets. Review of current economic indicators and monetary and financial statistics; their use for business and monetary analysis. Discussion and supervised research.

Prerequisite: Permission.

models, including business cycle and growth theories. Forecasting with aggregate models. Theory of social accounting.

Prerequisite: 19.705. Offered Spring semester.

ECONOMIC HISTORY

3.432 Economic Anthropology (3)

See the *Department of Anthropology*.

29.516 Economic History of Modern Europe I (3)

See the *Department of History*.

29.517 Economic History of Modern Europe II (3)

See the *Department of History*.

29.548 American Economic History I (3)

See the *Department of History*.

29.549 American Economic History II (3)

See the *Department of History*.

19.707 Economics of American Development (3)

A statistical and analytical investigation of long-run behavior of national income, population, savings, investment, consumption, labor productivity, and other factors affecting economic growth in the U.S. The problem of social control of the growth rate. The concepts of dual economy and balanced growth.

Prerequisite: Permission. Offered Fall semester.

19.708 European Economic Development (3)

Origins and development of capitalism in the western world, with emphasis on Britain. Emphasis is placed on economic theory to illuminate the process of historical development.

Prerequisite: Permission. Offered Spring semester.

ECONOMIC DEVELOPMENT

19.561 Development Planning (3)

This course will be concerned with both macro and micro aspects of development planning. Both plan formulation and implementation will be considered. Theory will be compared with actual experience. The course will consider selected developed, less developed, socialist, mixed-economy countries in Africa, Asia and Europe as well as the Americas.

19.761 Theory of Economic Development (3)

Patterns, theories and models of economic development of advanced and underdeveloped economies. Some historical theories and approaches to economic development. Theoretical concepts and issues in development planning.

Prerequisite: Permission. Offered Fall semester.

19.762 Current Problems of Economic Development (3)

Trends in living standards, economic planning programs, capital formation, industrial-agricultural techniques, monetary and fiscal structures, income distribution, foreign trade of underdeveloped countries.

Prerequisites: 19.307 or 19.761. Offered Spring semester.

AREA STUDIES

19.554 Economic Problems of Southern Asia (3)

A. Economic Problems of Southern Asia: Survey. Surveys the major economic features, problems and policies of the region that includes India, Pakistan, Ceylon, Burma, Thailand, Cambodia, Laos, Viet-Nam, Malaysia, Singapore, Indonesia and the Philippines.

Prerequisite: Permission. Offered in Fall Semester.

B. *Economic Problems of Southern Asia: Indonesia*. Covers the main factors and sectors in Indonesian economic life, beginning with a historical introduction and ending with an evaluation of current situation, policies, plans and prospects. Attention will be given to development theory and its relation to Indonesian reality.

Prerequisite: Permission. Offered Spring semester 1969.

C. *Economic Problems of Southern Asia: Malaysia and Singapore*. Examines Malaysia and Singapore as a heretofore successful single economic entity that is now facing unprecedented economic problems just at a time when the appetite for development has been well whetted.

Prerequisite: Permission. Offered Spring semester 1970.

19.555 Economic Problems of Latin America (3)

Economic geography, population, government organization, public finance and monetary policy, foreign trade, balance of payments, foreign investments, prospects of economic advancement.

Prerequisite: 19.307. Offered Fall semester.

19.559 Patterns and Problems of Economic Development in Asia (3)

A primarily historical treatment of economic development in Japan since 1854, in China since 1842, in India mainly in the Twentieth Century, and in Southeast Asia, mainly since World War I. Comparisons and contrasts among these areas and with Western experience.

Prerequisite: Permission.

ECONOMIC STATISTICS

19.521 Quantitative Economic Analysis (3)

Intermediate mathematical analysis of economic phenomena, elements of model building, game theory, and linear programming.

Prerequisite: 19.305 or permission. Offered Fall semester.

19.523 Econometrics I (3)

A review of regression analysis and statistics, testing of hypotheses, a rudimentary treatment of the problem of aggregation, identification, multicollinearity and serial correlation; sources of economic data; an examination of some literature on testing of economic models; introduction to the use of computers in economics.

Prerequisite: 19.521. Offered Spring semester.

19.721 Mathematical Economics (3)

Application of mathematical methods to the study of economics. Advanced study of static and dynamic models.

Prerequisites: 19.521, 41.222 & 41.223, 41.310 or permission.

19.722 Econometrics (3)

Advanced quantitative analysis. Construction of stochastic economic models. Problems of specification, estimation, verification and prediction.

Prerequisites: 19.521, 41.222 & 41.223, 41.310 or permission.

ECONOMIC SYSTEMS

19.552 Structure and Operation of the Soviet Economy (3)

Rate of economic growth, changing structure of economy with emphasis on period since 1928. Conditioning factors. Planning techniques and procedures. International economic relations.

Prerequisite: 19.101. Offered Spring semester.

19.712 Theory of Comparative Economic Organizations and Institutions (3)

An analytical approach to performance criteria, models of theoretical systems, and case studies of actual economies. The propositions of theoretical

- 19.781 Seminar in Economic Theory (3)**
Advanced analysis of problems in the theory of value and distribution, welfare economics, income determination, and economic development. Discussion and supervised research.
Prerequisite: Permission.
- 19.782 Seminar in Research Methods and Application (3)**
Basic methodological problems in research: workshop in research in selected economic areas. Discussion and supervised research.
Prerequisite: Permission.
- 19.783 Seminar in National Economic Policy (3)**
Economic aspects of leading problems in public policy. Formulation of national economic policy: planning principles and data bases. Discussion and supervised research.
Prerequisite: Permission.
- 19.784 Seminar in International Trade and Finance (3)**
Study of international monetary and trade theories. Analysis of basic factors influencing policies and trends in international trade, foreign investments, flow of aid. Use of balance of payments and international financial accounts for monetary and economic analysis. Central banks cooperation and monetary reform. International and interregional organizations. Discussion and supervised research.
Prerequisite: Permission. Offered Spring semester.
- 19.785 Seminar on Soviet-Type Economies (3)**
Advanced study of economic growth, planning techniques, and institutional structures of Soviet-type economies. Discussion and supervised research.
Prerequisite: Permission.
- 75.786 Seminar on the Economy of Mainland China (3)**
Advanced study of the problems of the economy of mainland China.
Prerequisite: Permission.
- 19.788 Seminar in Economic Development (3)**
Advanced study of the problems of underdeveloped countries. Discussion and supervised research.
Prerequisite: Permission. Offered Fall semester.
- 19.791 Workshop in Economics: Economic History, Quantitative Economics, International Development, Monetary and Fiscal Economics (3)**
Directed research in the specialized area. Several faculty members will meet with doctoral students to present and discuss research projects. May be repeated.
Prerequisite: Permission.
- 19.797 Master's Thesis Seminar (3-6)**
- 19.799 Doctoral Dissertation Seminar (6-12)**

Education

Professors:

SAMUEL ENGLE BURR, JR. (*Emeritus*)
 JOHN W. DEVOR
 CHALMER A. GROSS
 EDITH H. GROTEBERG
 FRANCES HOLLIDAY (*Emeritus*)
 PAUL D. LEEDY
 RALPH WHITFIELD
 STERLING D. WHITLEY (*Chairman*)

Associate Professors:

ROBERT J. CHINNIS
 BERNARD HODINKO (*Vice President of Student Affairs*)
 DENNIS D. MILLER

Assistant Professors:

JOHN B. EDGE
 JOHN WAKEFIELD

Adjunct Professors:

WILMER F. BENNETT
 LETITIA W. BROWN
 HENRY C. GREGORY
 WILLIAM H. JENKINS
 STANLEY V. SMITH

Professorial Lecturers:

NICHOLAS ADAMS
 HARVEY BANKS
 ARTHUR C. F. GILBERT
 ALVIN C. JENSEN
 BRENICE LAMBERTON
 NICHOLAS LONG
 EDNA K. MONTEFUS
 SYLVIA R. SHUGRUI
 EDNA R. SHILDS
 MATTHEW J. WHITEHEAD

Lecturers:

DAVID DRUM
 ROBERT JARDIN
 VICTOR RICE
 ANITA SOLOMON

UNDERGRADUATE DEGREES

Admission The following factors will be considered by the Committee on Admission to the Undergraduate Programs of Teacher Education:

- (1) Personality factors related to teacher effectiveness.
- (2) A cumulative grade point average of 1.5 and acceptable grades in English, and
- (3) Satisfactory test scores of SCAT and CEEB or the equivalent.

Students who plan to prepare for the teaching profession should notify the Department of Education their intentions as soon as they know they will be studying at The American University. The Department will provide an adviser and guidelines which will help in planning a program. This needs to be done at the earliest possible time.

University Requirements Program	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and Mathematics	(12 hours)
	Social Science	(12 hours)

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University. Consult the Department for suggested options available in languages.

Bachelor of Arts in Elementary and Early Childhood Education

Prerequisite 57.200 General Psychology

Departmental Requirements **MAJOR COURSES** (24-27 hours)
(a) 21.300 Foundations of Education: Social and Historical Bases: Philosophical and Psychological Principles (6 hours)
Required of all students in either elementary or secondary education. Equivalent courses which have been taken previous to registration at The American University may be substituted for part or all of the fields represented in this course. Observation and participation will be included.
(b) 21.350 Methods and Materials in Elementary and Early Childhood Education: General and Special, Reading, Language Arts, Social Studies, Mathematics, and Natural Sciences (9 hours)
Opportunities for observation and participation in elementary schools in the Washington area are provided.
(c) 21.444 Student Teaching: Elementary and Early Childhood: Grades K through 6 (9 or 12 hours)
Twelve or sixteen weeks of fulltime observation, participation and actual teaching are required, depending upon the number of hours of credit desired.

AREA OF CONCENTRATION

Students majoring in elementary education are required to have an area of concentration consisting of a minimum of 24 semester hours of work in an academic subject-matter field, eighteen of which must be in advanced courses (300 and 400 level). A detailed list of recommended courses in the various fields is available in the Department of Education offices.

RELATED COURSES

A total of 42 semester hours in major and related courses chosen from a department other than education are required. A detailed listing of related courses which are recommended is available in the Department of Education.

ELECTIVES

Elective courses will be necessary to complete a minimum of 120 hours, not including non-credit physical education.

Secondary Teaching

Major Undergraduate students planning to teach in secondary schools *must major in the field in which they plan to teach*. In addition, they must complete the following courses in professional education:

(a) 21.300 Foundations of Education: Social and Historical Bases: Philosophical and Psychological Principles (6 hours)

(b) 21.340 Methods and Materials in Secondary Education: General and Special: English, Foreign Languages, Mathematics, Natural Sciences, and Social Studies (4 hours)

Methods courses in music, art, and physical education are offered in the respective departments.

Observation and participation in secondary schools are provided for all students.

(c) 21.445 Student Teaching: Secondary Schools. Grades 7 through 12 (9 or 12 hours).

Nine weeks of full-time observation, participation, and teaching are required for nine semester hours of credit and twelve weeks for twelve semester hours of credit.

(d) Any other courses required for teacher certification in the state in which the student plans to teach.

GRADUATE DEGREES

Graduate requirements are constantly being refined in order to improve the excellence of the graduate programs of the Department. Students, therefore, should consult departmental offices for the latest information. The student must assume all responsibility for meeting deadlines as announced in the University Calendar, and in being conversant with all graduate regulations pertaining to their particular degree. These will be found in this Catalog Issue of the University Bulletin, and the Schedule of Classes Bulletin issued for each session.

MASTER DEGREES

The Department of Education offers two degrees in education at the master's level: the degree of Master of Education and the degree of Master of Arts in Education. Each of these degrees has its discrete orientation and addresses itself to the singular need of the student. The degree of Master of Education is appropriate for professional educators; teachers at all educational levels, education in its broader aspects and relationships. The degree of Master of Arts in Education is structured to meet the needs of those who, while they are primarily concerned with professional activities which are essentially educational in nature, yet prefer to emphasize the academic or research aspects of their educational interests. The degree of Master of Arts in Education may be thus more appropriate for teachers of a particular academic subject or research and field workers whose concerns with education are somewhat different from those of the classroom teacher or the school administrator.

Master of Education

See the Graduate Studies section of this Catalog before reading further.

Prerequisites All candidates must have had one course in general psychology or the equivalent; one course in statistics; a minimum of nine semester hours

of undergraduate and/or graduate credit in education; and an acceptable score on the *Graduate Record Aptitude Examination*; and/or *The Miller Analogies test*.

A student who seeks the Master of Education degree must in most cases be able to meet the requirements for a teacher's certificate in some state in elementary or secondary education. Certification requirements universally require student teaching (or successful teaching experience) or a teaching internship such as 21.691 In-service Training Project; Internship in Education.

A student may be admitted to a master's degree program only after all prerequisites are met.

Course Requirements In no case will a program for a master's degree require less than thirty credit hours, and some programs will require additional credit hours.
Examinations Courses required of all candidates are
21.510 Philosophy of Education
21.520 Advanced Psychology of Education
21.790 Research Seminar in Education I and
21.791 Research Seminar II (or an In-service Training Project)

Written Comprehensive Two are required, of which one must be taken in a core field; and the
Examination Fields other may be in another of the core fields, or in a specialized field of education, or in a field outside of education, but only if approved by the Department of Education as well as the Department other than Education. (See detailed literature in the Department of Education. See also page 117.)

A maximum of twelve hours of credit may be taken in a department other than the Department of Education if the student plans to take one comprehensive examination in a field outside of education. (Credit in an academic area is a requirement for the Advanced Professional Certificate in the State of Maryland.)

Graduate Comprehensive
Examinations See the listing under Master of Arts.

Master of Arts

Prerequisites Same as for Master of Education degree.

Course Requirements Same as for Master of Education degree, except that course 21.797 Master's Thesis Seminar must be taken in place of 21.796 Research Seminar in Education II, and a thesis must be written. (See detailed literature in Department of Education.)

Written Comprehensive Two are required, of which one must be taken including one in a core field of education, and the other one in a field outside of education. (See also page 117.)

Other Requirements An acceptable thesis and subsequent oral defense of the thesis.

CORE FIELDS

21.001 History and Philosophy of Education

21.002 Psychology of Education

SPECIALIZED FIELDS

21.003 Educational Administration

21.004 Special Education

21.005 School Counseling

21.006 Student Personnel Services In Higher Education

21.008 Supervision and Curriculum Development, with emphasis on mathematics, reading, or science.

DOCTORAL DEGREES

See the General Information section of this Catalog on Graduate Studies before reading further.

The Department of Education offers two degrees in education at the doctoral level: the degree of Doctor of Education and the degree of Doctor of Philosophy in Education. Each of these degrees has its own discrete orientation and addresses itself to the singular need of the student. The degree of Doctor of Education is appropriate for professional educators: teachers at all educational levels, administrative and supervisory personnel, and all others who are engaged primarily in activities of a purely educative nature. The degree of Doctor of Philosophy in Education is structured for those whose professional orientation to education is not so closely related to classroom activity but rather to research applications of education, or who may wish to relate education to a particular subject area or academic field.

Qualitatively and quantitatively the degrees are coequal. Their differences lie only in the need to structure each degree program to the professional objective of the student.

The privilege that is granted the student to pursue the discipline for the doctorate presumes that the ability of the student is equal to the rigorous demands of the doctoral program. This ability is evidenced by competence to pass appropriate comprehensive examinations which are addressed to the student's knowledge of his field, and his ability to carry out independent study and research in depth relative to that field. No amount of course work by itself will satisfy the total requirements for the doctorate.

The specific differences between the programs for the Doctor of Education degree and the Doctor of Philosophy degree are set forth in the following paragraphs.

Doctor of Education

Prerequisites Master's degree or equivalent, with a minimum of eighteen (18) semester hours of undergraduate and/or graduate work in education; one course in General Psychology or the equivalent; a course in basic statistics; and in some instances, the course requirements for state cer-

tification; in addition the student must have achieved a satisfactory score on the Graduate Record Aptitude Examination and/or the Miller Analogies Test, and have attained a satisfactory grade point index in his former graduate and undergraduate work. All prerequisites must be completed before admission to the program.

Course Requirements See page 38.

Minimum of 72 semester hours of approved graduate work, including 21.520 Advanced Psychology of Education (3 hours), 21.610 Advanced Philosophy of Education (3 hours), 21.790 Research Seminar in Education I (3 hours), and 21.799 Doctoral Dissertation Seminar (12 hours).

Written Comprehensive Examinations Four are required: including the two from the core fields in education (which are required of all doctoral candidates), a third from a specialized field in education, and a fourth from either another specialized field in education, or a field outside of education.

One of the core comprehensive examinations shall be taken as a requirement for advancement to candidacy which normally comes after twelve (12) to eighteen (18) hours of work in the doctoral program.

Other Requirements (1) Two consecutive semesters of full-time residence work at The American University,
(2) dissertation and oral defense of dissertation, (See detailed literature in the Department of Education.), and
(3) proficiency in two tools of research: (quantitative or languages). The tool examination in Educational and Psychological Measurement and Evaluation, which is given by the Department of Education, is administered on the Saturday following the first school week in January and the first Saturday in June each year.

Graduate Comprehensive Examination Fields See Listing below under Doctor of Philosophy.

Doctor of Philosophy

Prerequisites Same as for Doctor of Education degree.

Course Requirements Same as for Doctor of Education degree, except that sufficient course work must be taken in one field other than that of education so that the student is able to demonstrate competence in a comprehensive examination in that field.

Written Comprehensive Examinations Four are required: including the two in core fields in education (which are required of all doctoral candidates), one in a specialized field in education, and one in a field outside of education. The field outside of education may be from those academic areas which are commonly known as the liberal arts or from another professional field, if the student's anticipated occupation supports such an elective as being reasonable; in the latter case only if both the Department of Education and the outside department or school approve the choice. No comprehensive examination can be given *in absentia*.

Other Requirements Proficiency must be demonstrated in two tools of research, one of which must be in a foreign language. Two consecutive semesters of full-time residence work must be successfully completed at The American University. The dissertation for the Doctor of Philosophy degree must be a theoretical, pure-research type of study which should be of universal value as a contribution to knowledge. (See detailed literature in the Department of Education offices.)

Graduate Comprehensive Examination Fields **DOCTOR OF EDUCATION AND DOCTOR OF PHILOSOPHY DEGREES**

CORE FIELDS

21.021 Historical and Philosophical Foundations of Education

21.022 Psychological Foundations of Education

SPECIALIZED FIELDS

21.023 Educational Administration

21.024 Special Education

21.025 School Counseling

21.026 Student Personnel Services In Higher Education

21.028 Supervision and Curriculum Development—with emphasis on mathematics, reading, or science.

21.027 Religious Education or science (available through Wesley Theological Seminary)

Tool Examination Areas **LANGUAGES**

French, Spanish, German, or another foreign language by special permission of the Language Department.

QUANTITATIVE

Statistics, Evaluation, or another tool by special permission of the department involved.

Inter-Departmental Program For information on The Master of Science in Teaching program see the description of the offerings of The College of Continuing Education. For information on The Master of Science in Science Teaching program see the description of the offerings of the various department of Natural Sciences and Mathematics.

Professional Certificates For information regarding professional certificates that are offered by the Department of Education see the general information on Graduate Programs, page 36 of this publication and detailed literature on professional certificates available from the Office of the Department of Education.

UNDERGRADUATE COURSES

21.250 Mathematics for Elementary School Teachers (3)

A course designed to provide pre-service elementary school teachers with an adequate background in the mathematics which they are expected to teach. *Prerequisite:* 41.100, or equivalent. Fall, Spring, and Summer.

21.300 Foundations of Education: Social and Historical Bases: Philosophical and Psychological Principles (6)

A block-type course including history of education, educational sociology,

psychological, sociological and physiological factors of human growth and development and the learning process. Prerequisite to all other courses in the Department. Laboratory experiences are provided throughout the course.

Prerequisite: 57.200 and a grade point average of 1.3. Fall, Spring, and Summer.

21.320 Psychology of Education (3)

Fundamental psychological problems encountered in education. Nature and control of learning; theories of motivation; development of skills and knowledge; creative learning and critical thinking.

Prerequisite: 57.200. Offered only off-campus. Not offered to students who have taken 21.300.

21.340 Methods and Materials in Secondary Education: General and Special: English, Social Studies, Science, Mathematics, and Foreign Languages (4)

A study of general methods and materials and applications to special subjects fields. Laboratory experiences are provided in the university classroom and in secondary schools in the Washington area throughout the course.

Prerequisite: 21.300, or the equivalent, a grade point average of 1.5, and admission to a program of teacher education. Fall and Spring.

21.342 Methods of Teaching in Secondary Schools: General (3)

Study of general teaching methods, with some opportunity to apply these principles to certain specialized subject-matter fields. Laboratory experiences are provided in secondary schools in the Washington area and in the use of educational resources.

Prerequisite: 21.300, or the equivalent, and a grade point average of 1.5. Offered only off-campus. Not offered to students who have had 21.340.

21.345 Children's Literature (3)

Study of classic and contemporary prose and poetry, suited to children's interests and abilities, of the related authors and illustrators, and of the history of such literature. Techniques in guiding children's reading including presentation of books, story-telling, and choral reading.

21.350 Methods and Materials in Early Childhood and Elementary Education: General and Special: Reading, Language Arts, Mathematics, Social Studies, and Natural Sciences (9)

Study of materials and methods for use in teaching the various elementary school subjects. Laboratory experiences are provided in the university classroom, in elementary schools in the Washington area, and in the use of other educational resources.

Prerequisite: 21.300, or the equivalent, a grade point average of 1.5 and admission to a program of teacher education.

21.440 The Teacher and Educational Administration (3)

Study of administrative duties and relations of the teacher with reference to guidance, curriculum and financial responsibilities. Includes consideration of those phases of school work involving cooperation between or among teachers, supervisors and administrative officers.

Prerequisites: 21.300 and 21.340 or 21.350, or the equivalents. Fall and Spring.

21.444 Student Teaching: Early Childhood and Elementary (9-12)

Actual observation, participation, and teaching. Grades K through 6. Conferences arranged with university supervisor and seminars are held at frequent intervals. Fee (in addition to tuition) \$10 per credit hour up to a maximum of \$80 for 9 or 12 credit hours.

Prerequisite: Senior status, 21.300 and 21.350, or the equivalents, a grade point average of 1.5, and admission to a program of teacher education. Fall and Spring.

21.445 Student Teaching: Secondary Schools (9-12)

Actual observation, participation, and teaching. Grades 7 through 12. Conferences arranged with university supervisor and seminars are held at frequent intervals. Fee (in addition to tuition) \$10 per credit hour up to a maximum of \$80 for 9 or 12 credit hours.

Prerequisite: Senior status, 21.300 and 21.340, or the equivalents, a grade point average of 1.5, and admission to a program of teacher education. Fall and Spring.

ADVANCED COURSES

(500-level courses are graduate courses and will be so structured in content and requirement. Seniors with a grade point average of 1.75 may elect 500-level courses with permission of the instructor. 600 or 700-level courses are open only to graduate students only).

CORE COURSES IN EDUCATION

21.510 Philosophy of Education (3)

A course emphasizing the philosophical rationale underlying the processes, purposes, and methods of education, with special reference to the several schools of thought that have influenced education and determined its curriculum and organization.

Prerequisite: permission. Fall and Summer.

21.520 Advanced Psychology of Education (3)

Psychological principles and research having special relevance to education, including a consideration of motivation, attitudes, mental abilities, and the psychology of school subjects. Required of all students taking a master's or doctoral degree program.

Prerequisite: 21.300 or 21.320. Fall, Spring and Summer.

21.610 Philosophy of Education: Advanced (3)

Study in depth of doctrines and principles underlying education. A seminar-type course open to graduate students only. Required in all doctoral degree programs.

Prerequisite: 21.510, or the equivalent. Spring.

21.790 Research Seminar in Education I (3)

Fundamentals, methodology, and materials for educational research required of all students who plan to write a master's thesis, a doctoral dissertation, or a thesis option paper. A final document for the Master of Education degree.

Prerequisite: Permission. Fall, Spring, and Summer.

HISTORICAL FOUNDATIONS OF EDUCATION

21.511 History of Education in Western Culture (3)

The development of Western education from ancient Greece to modern times, emphasizing social, intellectual, religious, economic, and political factors; individual philosophers, and actual educational practices.

Prerequisite: Permission. Fall and Summer.

21.512 History of Education in the United States (3)

The development of American education from colonial times to the present; emphasizing cultural forces, intellectual currents, dominant philosophies, actual practices, and major educational problems as related to elementary, secondary, and higher education.

Prerequisite: 21.511 or permission. Spring.

21.613 Higher Education in the United States (3)

An examination of higher education in the United States. Function, structure, curriculum, students, faculty, government, and financing are among the elements considered.

Prerequisite: 21.512. Spring.

PSYCHOLOGICAL FOUNDATIONS OF EDUCATION

21.521 Mental Health in Schools (3)

Study of the development of wholesome relationships involving administrators, teachers, pupils, and other educational personnel. Some phases of the daily work of the teacher in the area of good mental hygiene are considered.

Prerequisite: 21.520 or permission. Fall and Summer.

21.522 Evaluation of Student Progress (3)

Materials and methods for use in evaluating students progress, especially at the elementary and secondary school levels. Required of most students working on graduate degree programs in education.

Prerequisite: One course in statistics. Fall, Spring, and Summer.

21.623 Learning Theories in Education (3)

Survey of the major theories of learning developed by psychologists. Study of selected research in human learning and the fundamental principles of the learning process.

Prerequisite: 21.520. Spring.

21.624 The School and Modern Social Problems (3)

Study and analysis of the social basis of the curriculum. Special reference to pupil needs. Current developments and methods of adapting the school to society.

Prerequisite: Permission. Fall.

21.525 Educational Statistics I (3)

Correlation and chi-square (non-parametric statistical methodology).

21.625 Educational Statistics II (3)

EDUCATIONAL ADMINISTRATION

21.531 School Administration (3)

A course designed to help prospective elementary and secondary school administrators acquire better knowledge and understanding of administrative principles, concepts and practices which are used in the schools.

Prerequisites: 21.300, 21.350 and teaching experience. Fall or Summer.

21.632 Problems of School Management (3)

A problem approach to the study of internal school management; administrative problems related to pupil and teacher personnel.

Prerequisite: 21.531 or the equivalent. Spring.

21.633 Financial and Business Administration for Schools (3)

School budgets, bonds, and taxes. Selecting, buying and distributing supplies and equipment. Accounting systems for finances and material. Other business aspects of education.

Prerequisite: 21.531 or the equivalent. Spring.

21.634 Essentials of School Law (3)

Study of the laws governing education in the United States, with special reference to the District of Columbia, Maryland, and Virginia.

Prerequisite: Permission. Spring.

SPECIAL EDUCATION

21.541 Special Education for Exceptional Children (3)

A study of the characteristics of exceptional children and of the problems in

providing education programs to meet their needs.

Prerequisites: 21.300, 21.340, or 21.350 or the equivalent. Fall.

21.542 Special Education for Retarded Pupils (3)

Provisions for class work and group activities for retarded children in public and private schools emphasizing methods, materials, and objectives.

Prerequisites: (same as for 21.541.) Spring.

21.543 Special Education for Gifted Pupils (3)

Provisions for class work, group, and individual activities for gifted children in elementary and secondary schools. Emphasis on methods, materials and objectives.

Prerequisites: (same as for 21.541.) Spring.

21.644 Diagnosis and Correction of Learning Disabilities (3)

Diagnosing general and specific learning disabilities. Developmental and remedial techniques for correction of learning disabilities. Clinical experience.

Prerequisites: 21.520 Advanced Psychology of Education, 57.525 Physiological Psychology and permission of instructor. Summer.

SCHOOL COUNSELING

21.551 Philosophy and Practices in Educational Guidance (3)

A basis course in guidance programs on elementary, secondary and higher educational levels. Philosophy and practices in guidance, collecting, organizing and using data on students, group and individual guidance, and the role of individual pupil personnel services.

Prerequisite: 21.300. Fall, Spring and Summer.

21.552 Analysis of the Individual for Counseling (3)

A study of pupil appraisal methods, data and problems. Special attention is given to personality and intelligence test interpretation.

Prerequisite: 21.551. Fall.

21.553 Techniques of Counseling in Education (3)

Designed to give the student an understanding of counseling theories and a degree of competence in applying counseling techniques. Students will consider contemporary theories and methods of counseling with practice in interviewing, counseling, and writing case reports.

Prerequisites: 21.551 and 21.552. Spring, Fall and Spring.

SUPERVISION AND CURRICULUM DEVELOPMENT

21.681 Curriculum Construction (3)

Psychological, cultural, and educational bases of elementary and secondary school curriculum and higher education. Practice in construction of curricular materials to meet modern educational problems.

Prerequisites: 21.300 and 21.340 or the equivalents. Fall or Summer.

21.682 School Supervision (3)

A course designed for prospective and in-service supervisors for elementary and secondary schools. Purposes and techniques of supervision are discussed.

Prerequisites: qualification for a teacher's certificate and/or teaching experience. Fall, Spring, and Summer.

21.683 Supervision of Student Teachers (3)

A course designed to provide guidance for the supervising teacher and others in their work with student teachers.

Prerequisites: qualifications for a teacher's certificate, and teaching experience. Summer.

SCIENCE CURRICULUM

21.581 Physical Sciences for Elementary School Teachers (4)

Recent findings in physics and chemistry, with special reference to science knowledge expected on the part of the elementary school teacher.
Fall and Off-Campus.

21.582 Biological and Geological Sciences for Elementary School Teachers (4)

Recent findings in the fields of biology and geology with special reference to science knowledge expected on the part of the elementary school teachers.
Spring, Summer, and Off-Campus.

READING CURRICULUM

21.571 Foundations of Reading Instruction (3)

A basic course designed to introduce the student to the broad considerations underlying the teaching of reading with special emphasis on reading disability and the problems of the retarded reader.

Prerequisite: 21.300 or equivalent. Fall.

21.572 Methods of Teaching Developmental Reading (3)

A course designed to meet the needs of teachers who are interested in the teaching of developmental reading or in planning such programs at the intermediate secondary level or in higher education.

Prerequisite: 21.571 or equivalent. Spring.

21.673 The Diagnosis of Reading Disability (3)

A course designed to assist the teacher in diagnosing the causes of reading disability and prescribing proper treatment. Practicum work with children who exhibit reading disability is an essential part of this course.

Prerequisites: 21.520, 21.571, and permission of the instructor. Summer.

21.664 Principles of College Teaching (3)

An analytical study of teaching on the college level. Consideration is given to instructional methods as they relate to research and psychological bases. The use and effectiveness of various teaching media is examined.

Prerequisite: Permission. Summer.

21.765 Seminar In Education: Student Personnel

A critique of issues and problems in contemporary programs of student personnel services.

Prerequisite: Permission. Spring.

21.769 Internship in Student Personnel Services In Higher Education (3-6)

For advanced students in student personnel services in higher education. Students are assigned to an area or areas of a program of student personnel services for exploratory administrative, case and research experience.

Prerequisite: Permission. Fall, Spring, and Summer.

21.666 Educational Materials and Techniques (3-6)

Workshop type course, covering selected phases of principles, methods, curriculum construction, administration, guidance, testing, and student personnel services.

Prerequisite: Permission only.

INSTITUTES

31.631 Institute on Reading and Learning Disabilities (3)

Guided experiences in remedial reading, and diagnosis and correction of learning difficulties with children and youth. To be taken in conjunction with 21.572 or 21.673, thus providing students with work toward meeting requirements for teachers of special education, reading specialists, psychologists and counselors, and classroom teachers. Summer.

WORKSHOPS, SEMINARS AND INTERNSHIPS

21.710 Seminar in Teaching (3)

To operate as a cycle stressing, from semester to semester the following areas: curriculum construction, public relations, school administration and supervision, educational research, and methods and materials of teaching. (May be repeated for credit.)

Prerequisite: Permission. Fall, Spring, and Summer.

21.790 Research Seminar in Education I (3)

Fundamentals, methodology, and materials for educational research required of all students who plan to write a master's thesis, a doctoral dissertation, or a thesis option paper.

Prerequisite: Permission. Fall, Spring, and Summer.

21.791 Research Seminar in Education II (3)

A seminar-type course in which a comprehensive research paper is required. Designed especially for M.Ed. candidates.

Prerequisites: 21.790 and advancement to candidacy for a master's degree. Fall, Spring, and Summer.

21.792 In-Service Training Project: Internship in Education (3-12)

Internships in cooperating local school systems by a limited number of properly qualified persons as an integral part of their degree programs.

Prerequisites: Advancement to candidacy for M.Ed. or Ed.D. degree; permission of the Chairman, Department of Education, and the Dean of the College of Arts and Sciences. Fall and Spring.

21.797 Master's Thesis Seminar (3-6)

At least three hours required of all students working on a master's thesis.

Prerequisites: 21.790 and advancement to candidacy for a master's degree. Fall, Spring, and Summer.

21.799 Doctoral Dissertation Seminar (3-12)

Required of all students working on doctoral dissertations.

Prerequisites: 21.790 and advancement to candidacy for a doctoral degree. Fall, Spring, and Summer.

English

Professors:

RUDOLPH VON ABEL
MERRITT C. BATCHELDER
CHARLES M. CLARK (*on leave 1968-69*)
HAZEL H. FEAGANS (*Emeritus*)
BARRY A. MARKS (*Chairman*)
LOUISE M. YOUNG

Associate Professors:

PIERRE HAN
FAYE L. KELLY
MARY M. PATTON
JEANNE A. ROBERTS

Assistant Professors:

RAYMOND W. AIKEN
ARTHUR P. BEAN, JR.
MARY ANN G. HOOD
EDWARD KESSLER
FRANCES H. KING

DOROTHY A. OWENS
WILLIAM EARL STAHR
FRANK TURAJ
SHIRLEY P. YARNALL
FRANCIS E. ZAPATKA

Instructors:

DINSHAW BURJORJEE
CHARLES P. CORN
BARBARA RASKIN

Adjunct Professors:

EDWIN E. GUNBERG
RALPH ROBIN

Professorial Lecturers:

ROBERT B. ANDERSON
JOHN C. CLENDENIN

GERALD ELBERS
PHILIP W. IDE
ALLEN LEFCOWITZ
WILLIAM MOSIER
JOHN W. YARNALL

Lecturers:

JANE K. BROOKS
THELMA K. BURKHALTER
DORIS N. CELARIER
SYDNEY CONNOR
HAROLD H. COOPER
ANITA Y. HERSEY
BARBARA LEFCOWITZ
VIRGINIA R. RAPPORT
JANE SUMMERS STANHOPE
THOMAS A. STANHOPE
WILLIAM H. STRUHS, JR.
VINCENT TROFI
MARGARET L. WEAVER
GEORGE WEINER

UNDERGRADUATE DEGREE Bachelor of Arts

University Requirements See page 29.

Composition and Reading	(6 hours)
Physical Education	(4 units—non credit)
Humanities are normally satisfied by major and related requirements.	
Consult department	(12 hours)
Science and Mathematics	(12 hours)
Social Science	(12 hours)

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Recommended languages: French or German. With departmental permission, Spanish or Russian may be substituted.

mental Requirements MAJOR COURSES (36 hours)

23.115 Approaches to Literature (3); Survey courses in English and American Literature (12); 23.392 Senior Undergraduate Seminar (3); and 18 additional hours in literature, writing, or English language. Students planning to teach should elect at least three credits in English language or linguistics.

RELATED COURSES (12 hours)

Either 12 hours of courses in one related field, as a minor; or six hours of courses in each of two related fields. The following fields are recommended: art, history, journalism, linguistics, music, philosophy, speech arts, foreign literatures.

TOOL COURSES

None

Electives To complete minimum of 120 hours plus non credit physical education.

SECONDARY SCHOOL TEACHER TRAINING

The Department of English, in cooperation with the Department of Education, offers a curriculum which will lead to certification for teaching English at the high school level. Students who have selected this as their vocational objective should see the teacher education advisor in the English Department during the second semester of the Freshman year.

GRADUATE DEGREE

Master of Arts

Course Requirements Minimum of 30 hours of approved graduate work, including 23.720 Graduate Seminar in English Literature (3) and/or 23.730 Graduate Seminar in American Literature (3); and 23.797 Master's Thesis Seminar (6).

Written Comprehensive Examinations: Two, including one general examination in English and American literature guided by a reading list; and one in a specialized field chosen in consultation with the English Department.

Other Requirements Proficiency examination in French or German; Thesis.

Graduate Comprehensive Examination Fields GROUP A. 23.100 General Examination in English and American Literature.

GROUP B. A selection of one specialized field as approved by the English Department:
23.200 Series—An Historical Period of English Literature
23.300 Series—An Historical Period of American Literature
23.400 Series—An Aspect of Comparative Literature
23.500 Series—Literary Theory and Criticism

UNDERGRADUATE COURSES

1.100 Honors English I (3)

Limited to first-year students whose registration is approved by the Honors Board of the College of Arts and Sciences, or by the Dean, School of International Service.

1.101 Honors English II (3)

Limited to first-year students whose registration is approved by the Honors Board of the College of Arts and Sciences, or by the Dean, School of International Service.

23.010 English Workshop (0)

A review course for non-native speakers of English. Classes and tutorials in the principal skills of communication in English. Admission on the basis of examination. Tuition, part-time students, regular three credit hour charge.

23.100 Composition and Reading I (3)

Training and practice in writing and critical reading. Concepts of language and rhetoric as the basis for effective expression in English.

23.101 Composition and Reading II (3)

Continuation of 23.100. Includes the techniques of library research, the organization and writing of a documented research paper.

Prerequisite: 23.100.

Special Sections:

23.100-23.101 (FS) (3, 3)

A section of Composition and Reading designed for foreign students. Similar in content to the regular sections. Foreign students whose competence in English makes them eligible for college-level work are assigned to this section so that attention can be given to their special language problems.

23.103 Advanced Composition (3)

Expository writing. For students who have completed Composition and Reading (6) and wish continued training and practice in the skills of writing.

Prerequisite: 23.101.

23.115 Approaches to Literature (3)

An introduction to the study of literature. Techniques for analyzing a literary work; literary traditions and conventions; the major genres. Readings, discussions, papers. *A required course for beginning English majors.*

Prerequisite: Permission.

23.120 World Literature I (3)

Introduction to literary forms and masterpieces of Western civilization from the ancient Greeks to the 18th century. Primarily for students not majoring in English.

23.121 World Literature II (3)

Introduction to literary forms and masterpieces of Western civilization in the 19th and 20th centuries. Primarily for students not majoring in English.

23.310 English Literature I (3)

Survey of English prose and poetry from beginnings to the mid-18th century.

Prerequisite to advanced courses in English Literature.

23.311 English Literature II (3)

Survey of English prose and poetry from mid-18th century to the 20th century. *Prerequisite to advanced courses in English Literature.*

23.320 American Literature I (3)

A survey of American literature from the colonial period to about 1860.

Prerequisite to advanced courses in American Literature.

- 23.321 American Literature II (3)**
A survey of American literature from 1860 to the 20th century.
Prerequisite to advanced courses in American Literature.
- 23.330 The Short Story (3)**
Development of the short story as an art form. Reading and analysis of stories by 19th and 20th century writers.
- 23.331 Aspects of Poetry (3)**
Study of poetic forms and techniques, using a non-historical approach. Reading and analysis of English and American poems.
- 23.333 Literary Criticism (3)**
Readings in the mainstream of criticism and critical theory, from Plato to the present.
Prerequisite: One year of literature.
- 23.392 Senior Undergraduate Seminar in English (3)**
An integrating seminar for majors. Review of the aims, methods, and materials of literary study and research. Readings, discussions, field trips, papers.
A required course for majoring in English.
Prerequisite: Departmental permission.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 700-level courses are open only to graduate students.)

- 23.503 History of the English Language (3)**
Development of the language from Old English to Modern English, with special studies on phonology, grammar, and vocabulary.
Prerequisite: Senior or graduate standing.
- 23.504 Modern American English (3)**
The structure of American English, with emphasis on the application of modern linguistic science to the teaching of grammar and writing.
Prerequisite: Senior or graduate standing.
- 23.510 Creative Writing I (3)**
Training in writing prose and poetry through individual literary projects suited to the student's needs and interests.
Prerequisite: Permission of instructor.
- 23.511 Creative Writing II (3)**
Style and structure in writing prose and poetry. Practice in writing essays, short stories, and poems. Readings, discussions, conferences.
Prerequisite: Permission of instructor.
- 23.520 Chaucer I (3)**
Introduction to the reading of Chaucer's poetry. Chaucer as man and poet, and his 14th century background. Readings in *The Canterbury Tales*.
Prerequisite: 23.310 and 23.311.
- 23.521 Chaucer II (3)**
Readings in *The Canterbury Tales*, *Troilus and Criseyde*, and some of the minor poems.
Prerequisite: 23.520, or permission.
- 23.522 English Drama: 10th Century to 1642 (3)**
The development of English drama through the study of the plays of the predecessors and contemporaries of Shakespeare and the post-Elizabethan playwrights.
Prerequisite: 23.310 and 23.311 or permission.

- 23.523 Renaissance Literature (3)**
Literature of the Renaissance in Italy, France, England, exclusive of drama, with emphasis upon the literature of the Tudor period in England.
Prerequisite: 23.310 and 23.311.
- 23.524 Shakespeare I (3)**
The earlier plays, with attention to the development of Shakespeare's artistry, his use of sources, the social and political backgrounds.
Prerequisite: 23.310 and 23.311 or permission.
- 23.525 Shakespeare II (3)**
The later plays.
Prerequisite: 23.310 and 23.311 or permission.
- 23.526 Seventeenth Century Literature (3)**
Commonwealth and Restoration Literature, with some attention to continental literature of the century, exclusive of drama.
Prerequisite: 23.310 and 23.311.
- 23.527 Milton (3)**
Readings in the major and minor poems, with special attention to *Paradise Lost*. Some readings in his prose works.
Prerequisite: 23.310 and 23.311.
- 23.528 Studies in 18th Century Literature (3)**
Literature of 18th century England, with special reference to outstanding authors and dominant literary forms in the neoclassical tradition.
Prerequisite: 23.310 and 23.311.
- 23.529 Restoration and 18th Century Drama (3)**
English drama from Dryden to Sheridan.
Prerequisite: 23.310 and 23.311 or permission.
- 23.531 The English Novel I (3)**
The English novel in the 18th century. Reading of selected novels by Defoe, Richardson, Fielding, Smollett, Sterne, and Walpole.
Prerequisite: 23.310 and 23.311.
- 23.532 The English Novel II (3)**
The English novel during the 19th century. Selected novels by Scott, Austen, Dickens, Thackeray, Eliot, and Hardy.
Prerequisite: 23.310 and 23.311.
- 23.533 Romantic Literature I (3)**
A study of English literature of the Romantic Movement, with emphasis on Blake, Burns, Wordsworth and Coleridge.
Prerequisite: 23.310 and 23.311.
- 23.534 Romantic Literature II (3)**
A study of the chief writings of Byron, Shelley, and Keats, along with their 19th century contemporaries.
Prerequisite: 23.310 and 23.311.
- 23.535 Victorian Prose (3)**
The Victorian Age in English literature, as reflected in the work of selected major prose writers.
Prerequisite: 23.310 and 23.311.
- 23.536 Victorian Poetry (3)**
The major Victorian poets, Tennyson to Hopkins.
Prerequisite: 23.310 and 23.311.
- 23.537 Modern British Literature (3)**
British literature from 1900 to the present, exclusive of drama. Emphasis on major writers.
Prerequisite: 23.310 and 23.311.

- 23.538 British Drama: 19th and 20th centuries (3)**
British drama from Sheridan to the present.
Prerequisite: 23.310 and 23.311 or 67.551.
- 23.540 Emerson and His Era (3)**
Study of the artistic achievement of the "American Renaissance" as embodied in the writings of Emerson, Thoreau, Hawthorne, and Melville.
Prerequisite: 23.320 and 23.321.
- 23.541 Howells and His Era (3)**
A study of post-bellum literary movements as reflected in the writings of Whitman, Howells, Twain, and Henry James.
Prerequisite: 23.320 and 23.321.
- 23.542 The Romantic Tradition (3)**
A comparative study of 19th century American literature and English literature of the Romantic Movement.
Prerequisite: 23.310 and 23.311, and 23.320 and 23.321.
- 23.543 The Realist Tradition (3)**
A comparative study of late 19th century American literature and English literature as related to the rise of Realism and Naturalism.
Prerequisite: 23.310 and 23.311 and 23.320 and 23.321.
- 23.544 The American Novel I (3)**
Development of the novel 1830-1900 as exemplified in the writings of major figures.
Prerequisite: 23.320 and 23.321.
- 23.545 The American Novel II (3)**
The development of the novel in the twentieth century through a reading of representative works by major figures.
Prerequisite: 23.320 and 23.321.
- 23.546 Poetry in America (3)**
A study of selected American poets, with attention to the central traditions of American poetry.
Prerequisite: Permission.
- 23.547 Modern American Literature (3)**
Literature since 1900, with special attention to the period since 1920.
Prerequisite: 23.320 and 23.321.
- 23.549 Modern American Drama (3)**
American drama from O'Neill to the present.
Prerequisite: 23.320 and 23.321 or 67.556.
- 23.550 Classical Drama (3)**
A study of Greek and Roman tragedy and comedy through the reading of selected works in translation.
Prerequisite: Permission.
- 23.552 Comparative Literature I (3)**
Comparative study of the writings of European authors in the Romantic tradition: Rousseau, Goethe, Stendahl, and others.
- 23.553 Comparative Literature II (3)**
Comparative study of the writings of European authors of the late 19th and early 20th centuries: Nietzsche, Zola, Ibsen and others.
Prerequisite: Upperclass or graduate standing.
- 23.554 Contemporary European Literature (3)**
Comparative study of recent European writers.
Prerequisite: Upperclass or graduate standing.

- 23.555 Major European Novels I (3)**
Intensive study of major French and Russian novels of the 19th century. (In translation.)
Prerequisite: Permission.
- 23.556 Major European Novels II (3)**
Intensive study of major novels of 20th century. (In translation.)
Prerequisite: Permission.
- 23.557 Modern European Drama (3)**
Representative plays of European playwrights exclusive of the British Isles from the late 19th century to the present.
Prerequisite: Permission or 67.551.
- 23.570 Interrelation of the Arts (3)**
Study of the varieties and channels of relationship among the major arts (literature, painting, sculpture, architecture, and music).
Prerequisite: Upperclass or graduate standing.
- 23.572 Problems in Literary Criticism (3)**
Intensive study of a specific problem in literary esthetics, the problem to vary from year to year. Enrollment limited.
Prerequisite: 23.333 or equivalent.
- 23.720 Graduate Seminar in English Literature (3)**
An intensive study of selected problems in English literature. (Offered on alternate semesters with 23.730.)
- 23.722 Studies in the Age of Shakespeare (3)**
Survey of the social, philosophical, religious, and cultural milieu of Shakespeare. Problems and materials relevant to a scholarly study of Shakespeare.
- 23.730 Graduate Seminar in American Literature (3)**
An intensive study of selected problems in American literature. (Offered on alternate semesters with 23.720.)
- 23.797 Master's Thesis Seminar (3-6)**
For M.A. candidates only. Methods and materials of research (3); the preparation of a thesis under the direction of a departmental committee (3).

See also: *Department of Speech Arts.*

The following courses may be taken for credits in English:

- 67.550 History of Theatre I (3)
67.551 History of Theatre II (3)
67.556 History of the American Theatre (3)
67.560 Dramatic Theory and Criticism (3)

Health, Physical Education and Recreation

Professor:

DANIEL S. GEISER

Associate Professors:

ROBERT H. FRAILEY (*Chairman*)

VIRGINIA E. HAWKE

JOSEPHINE W. HUBBELL

Assistant Professors:

JAMES D. FRADY

NAIMA PREVOTS

BARBARA J. REIMANN

Instructors:

JOANNE M. BENTON

BILLY G. COWARD

JOHN C. MC HUGH

LAWRENCE G. NYCE

ROY J. POWER

JOSEPH R. ROGERS

Prof. Lecturer:

WILLIAM W. BLAISDELL

ROSWELL D. MERRICK

Adjunct Professor:

HUGO SCHULZE

Lecturers:

WALLACE B. HAGERHORST

ALAN H. KYBER

MASAHITO NISHIDA

JOSEPH E. ZOK

UNDERGRADUATE DEGREE Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Majors consult department.	
	Humanities	(12 hours)
	Science and Mathematics	(12 hours)
Language Requirement	Required courses:	
	15.100 Science of Chemistry (3)	
	9.110-9.111 General Biology I and II (8)	
	Social Science	(12 hours)
	Through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University. At the intermediate level, students should elect "Intermediate Reading" (3).	
Departmental Requirements	MAJOR COURSES	
	Core courses (38 hours)	
	49.111 (Men) Football-Wrestling (2)	
	(Women) Field Hockey-Modern Dance (2)	

- 49.112 Soccer-Swimming (2)
- 49.113 (Men) Basketball-Baseball (2)
(Women) Basketball-Softball (2)
- 49.114 Gymnastics-Track and Field (2)
- 49.121 History and Principles of Health, Physical Education and Recreation (3)
- 49.205 The Teaching of Individual, Dual and Recreation Activities (1 each, minimum 4 credits)
- 49.220 First Aid and Athletic Injuries (2)
- 49.310 Elementary School Rhythmic Activities (3)
- 49.320 Methods and Materials in Physical Education (3)
- 49.335 Elementary School Play and Games (3)
- 49.421 Organization and Administration of Health, Physical Education, and Athletics (3)
- 49.424 Kinesiology and Physiology of Exercise (3)
- 49.500 Measurement and Evaluation of Health, Physical Education, and Recreation (3)
- 49.501 Health Education (3)

AREAS OF SPECIALIZATION

The Dance (10 hours)

- 49.210 Workshop in Dance Production (1)
- 49.325 Rhythms and Accompaniment (2)
- 49.326 History and Philosophy of Dance (3)
- 49.400 Advanced Methods of Teaching Modern Dance (1)
- 49.401 Composition of Dance (3)

Athletic Coaching (19 hours)

(For men majoring in other areas desiring professional qualifications for coaching) 49.111, 49.112, 49.113, 49.114 (2 each).

- 49.220 First Aid and Athletic Injuries (2)
- 49.324 Principles and Psychology of Coaching (3)
- 49.421 Organization and Administration of Health, Physical Education, and Athletics (3)
- 49.424 Kinesiology and Physiology of Exercise (3)
and participation in one or more sports (see department adviser)

Elementary Physical Education

Students interested in teaching at the Elementary level consult Department.

RELATED COURSES (25-28 hours)

- 9.330-9.331 Human Anatomy and Physiology I and II (4, 4)
- 21.300 Foundations of Education (6)
- 57.400 Child Psychology (3), or
- 57.401 Adolescent Psychology (3)
- 21.445 Student Teaching: Secondary Schools (9-12)

TOOL COURSE (3 hours)

- 67.110 Public Speaking (3)

Electives Suggested courses to complete 120 hours plus non-credit physical education.

- 49.222 (Women) Rules and Officiating (2)

- 49.301 Water Safety Instructor (2)
 49.324 Principles and Psychology of Coaching (3)

GRADUATE STUDIES

The Department of Health, Physical Education and Recreation offers a specialization in Health and Physical Education through the established Master of Arts and Master of Education programs in the Department of Education. Students electing this specialization should take as part of the 15 required hours 49.500 Measurement and Evaluation in Health and Physical Education (3) in place of 21.522 Evaluation of Student Progress (3); and must elect 49.001 Health and Physical Education as one of their two required comprehensive examination fields.

Prerequisites See prerequisites under Department of Education; page 113. In addition to the Graduate Record Aptitude Examination or the Miller's Analogies Examination, the candidate should submit an acceptable score on the Advanced Physical Education Examination.

Graduate Comprehensive

Examination Field 49.001 Health and Physical Education.

UNDERGRADUATE COURSES

49.010 Freshmen Physical Education I (0)

Instruction in a basic program of swimming, gymnastics, dance/or wrestling. Required of all entering students who have not satisfied the University Requirements in Physical Education. Tuition, part-time students, regular one-credit hour charge.

49.020 Freshmen Physical Education II (0)

Instruction in health, sports and general orientation with a testing program in physical fitness. Required of all entering students who have not satisfied the University Requirements in Physical Education. Tuition, part-time students, regular one-credit hour charge.

49.030 Physical Education Activities (0)

Instruction in the fundamentals of selected sports and recreational activities on both a beginning and intermediate level. Activities include Archery, Badminton, Bowling, Canoeing, Diving, Fencing, Golf, Gymnastics, Horseback Riding, Judo, Life Saving, Modern Dance, Social Dance, and Ethnic Dance, Square Dance, Skin and SCUBA Diving, Swimming, Tennis, Volleyball and Weight Training. Tuition, part-time students, regular one-credit hour charge.
Prerequisite: 49.001 Health and Physical Education.

49.103 Physical Education Activities (1)

The same as 49.030. Limited to students who have satisfied the four unit non-credit physical education requirement. Students may elect to take activities for credit not to exceed four (4).

49.111 (Men) Football—Wrestling (2) (Women) Hockey—Modern Dance (2)

The development of skills, techniques and methods in teaching each sport, including rules and team organization.

- 49.112 Soccer—Swimming (2)**
The development of skills, techniques and methods in teaching each sport, including rules and team organization.
- 49.113 (Men) Basketball—Baseball (2)**
(Women) Basketball—Softball (2)
The development of skills, techniques and methods in teaching each sport, including rules and team organization.
- 49.114 Gymnastics—Track and Field (2)**
The development of skills, techniques and methods in teaching each sport, including rules.
- 49.121 History and Principles of Health, Physical Education and Recreation (3)**
An introduction to the professions of health education, physical education and recreation. Consideration of development, role in general education, and scientific principles guiding the conduct of these programs.
- 49.205 The Teaching of Individual, Dual and Recreational Activities (1)**
The development of skills and methods in teaching Archery, Badminton, Bowling, Fencing, Golf, Square Dance, Ethnic Dance, Tennis, and Volleyball. Course may be repeated four times.
Prerequisite: Permission of Department.
- 49.210 Workshop in Dance Production (1)**
The development of techniques and the provision of experience in the various phases of dance production. May be repeated for credit.
- 49.220 First Aid and Athletic Injuries (2)**
Techniques of administering immediate and temporary care to an injured person with emphasis on the prevention and treatment of injuries prevalent in athletics.
- 49.222 (Women) Rules and Officiating (2)**
Study of rules and officiating techniques of selected sports. Supervised practice in officiating.
- 49.301 Water Safety Instructor (2)**
Preparation for the teaching of swimming and diving. Techniques of aquatic safety.
Prerequisite: Senior Life Saving.
- 49.310 Elementary School Rhythmic Activities (3)**
Survey of materials and methods of teaching fundamental movement, rhythms and singing games at the elementary school level.
Prerequisite: Junior Standing.
- 49.320 Methods and Materials in Physical Education (3)**
Principles and techniques of instruction applicable to physical education at elementary and secondary school levels.
- 49.324 Principles and Psychology of Coaching (3)**
Principles and techniques of coaching athletic teams with an emphasis on the psychology of teaching and motivating athletes.
- 49.325 Rhythms and Accompaniment (2)**
The development of an awareness of rhythms and an understanding of the basic elements of time; and ability to apply these to dance composition and accompaniment.
- 49.326 History and Philosophy of Dance (3)**
An understanding and appreciation of the contribution of dance to the cultural development of mankind.

- 49.335 Elementary School Play and Games (3)**
Survey and application of physical education and play activities for elementary school children.
- 49.400 Advanced Methods of Teaching Modern Dance (1)**
An understanding of the value of dance education and the development of approaches to teaching dance at the various age levels.
- 49.401 Composition of Dance (3)**
The discovery of a rich movement vocabulary and the ability to organize these into appropriate dance forms.
- 49.421 Organization and Administration of Health, Physical Education and Athletics (3)**
The principles of organizing and administering health, physical education and athletic programs. Consideration of personnel, schedules, equipment, facilities, curriculum, and related problems.
- 49.424 Kinesiology and Physiology of Exercise (3)**
The study of mechanical principles as they apply to the performance of motor skills, and the physiological changes as they occur in the body during and after activity.

ADVANCED COURSES

(500-level courses open to graduate students and advanced undergraduates; 600 level courses open only to graduate students.)

- 49.500 Measurement and Evaluation in Health and Physical Education (3)**
The purposes and principles of measurement and evaluation in health and physical education. Survey of selected tests and basic statistical techniques for interpretation of results.
- 49.501 Health Education (3)**
The content and methods in teaching health education at both the elementary and secondary school levels.
- 49.520 Current Problems, Trends and Research in Physical Education (3)**
The identification of current problems in the profession and a survey and interpretation of research and trends pertaining to them.
- 49.530 Curriculum in Physical Education (3)**
Principles and procedures of curriculum development in Physical Education.
- 49.550 Recreation Programs (3)**
A survey of agencies and programs in the field of recreation with attention to principles and techniques for conducting these programs.
- 49.601 Workshop in Health, Physical Education and Recreation (3)**
The investigation of a specific timely topic in the area of Health, Physical Education and Recreation. Content will vary with each semester. May be repeated for credit.
- 49.610 Planning Facilities for Health, Physical Education and Recreation (3)**
The principles, criteria, and standards used in planning facilities for Health, Physical Education and Recreation.

History

Professors:

CARL G. ANTHON
DAVID J. BRANDENBURG
(*Chairman*)
HAROLD E. DAVIS
DONALD DERBY (*Secretary of
the University*)
DOROTHY D. GONDOS
JEAN T. JOUGHIN (*on leave
spring 1969*)
ERNST POSNER (*Emeritus*)
TAKEHIKO YOSHIHASHI (S.I.S.)

Associate Professors:

ROBERT BEISNER (*on leave
1968-69*)
ROGER H. BROWN

JOHN J. FINAN (*on leave
1968-69*)

JOHN R. KIRKLAND
CHARLES H. HEIMSATH (S.I.S.)
CHARLES MC LAUGHLIN
ALBERT D. MOTT (S.I.S.)
IVAN L. RUDNYTSKY
ALISON G. OLSON

Assistant Professors:

THOMAS V. DIBACCO
JOHN R. KIRKLAND
IRA N. KLEIN

Instructor:

TERENCE R. MURPHY

Adjunct Professors:

FRANK B. EVANS
KERIM K. KEY

Professorial Lecturers:

EUIZABETH EISENSTEIN
JAVIER MALAGÓN
F. TAYLOR PECK

Lecturer:

CLAUDIA R. UPPER

DEGREE PROGRAMS

Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities*	(12 hours)
	Science and Mathematics	(12 hours)
	Social Sciences*	(12 hours)

Language Requirement One language is required through the intermediate level, either by credit or waiver. Students who have completed the requirement are urged to begin a second language or to go on with study of the advanced language.

* History majors may fulfill either the Humanities or Social Sciences requirement by the hours in the major. History credits may not, however, be counted for both Humanities and Social Sciences. Further, regardless of whether History is counted as a Humanity or as a Social Science for distribution purposes, all History majors must complete at least six hours of course work in humanities other than History and at least six hours of course work in social sciences other than History.

Departmental Requirements MAJOR COURSES: 30 hours, grades of *C* or better.

- a) Ancient World or Medieval History required (3)
- b) Historiography (3)
- c) Undergraduate Seminar (3)
- d) Other Courses: 21 hours.

U.S. History I and II and Europe I and II are recommended.

RELATED COURSES: 12 hours, 300-level or above; grades of *C* or better. The related field must be within the choices indicated—i.e., 12 hours of a social science other than history (a); or 12 hours of distributed social sciences other than history (c); etc.

- a) A Social Science other than History
- b) A Humanity other than History
- c) Distributed Social Sciences
- d) Distributed Humanities
- e) Distributed Natural Sciences and Math or one field of Science or Math.

To be accepted as a History major, the student must have a one-point average, and six hours of *B* in History.

To receive the B.A. in History, students must take at least 15 hours of History courses at The American University.

A student may not take Historiography unless he is a junior or unless he has had U.S. History I and II or History of Modern Europe I and II or waivers.

Students may not take the Undergraduate Seminar during the same semester as Practice Teaching.

The Graduate Record Examination must be taken before graduation, for a degree from the College of Arts and Sciences, and students must achieve a satisfactory score on this test.

History majors are reminded that grades of *D* are not acceptable for the major or for the related field.

Departmental Honors To be eligible for the honors program a student must have at least 60 hours of college work with a minimum cumulative index of 2.00 and at least 15 hours in history courses, completed with a minimum cumulative of 2.2.

SELECTION:

In addition to meeting the above requirements, the student must be recommended by the Department faculty for selection and approved by the Chairman of the Department and the Honors Board of CAS.

STUDIES:

The nature of the project will depend on the student's interests and capabilities and the willingness of an instructor to undertake the project. Normally, the potential honor student will first register for a reading project (.390); if successful in this project, he will be encouraged to undertake a research project (.490). Departmental honors usually will be assigned only on the basis of completion of both the reading and research projects with grades of *A*.

GRADUATE DEGREES

Master of Arts

Admission Admission to a graduate program is at the discretion of a departmental committee, within the frame of reference of University and College of Arts and Sciences standards (see page 00). In general, a better than 2.0 index in the undergraduate major and 1.75 index (on a three-point basis) is required. Other admissions requirements: evidence of a substantial beginning in at least one foreign language; the Graduate Record Examination; two letters of recommendation from recent professors. Full-time students must be prepared to finish the degree in one calendar year from time of entry into the program.

Comprehensive examinations are given in January and May. Admission to the M.A. program does not insure admission to the Ph.D. program. In general, admission, especially for full-time students, is for the Fall session. Entry into a graduate program in February, while possible in some cases, will make for scheduling and time-table difficulties.

A graduate degree in history cannot be achieved in summer sessions alone.

Provisional admission may be extended in certain cases where the above standards are not fully met. In order to gain full admission status, the student admitted in this way must demonstrate to the satisfaction of the Department ability to pursue a degree program with reasonable promise of success. Upon completion of 12 credit hours of courses taken for letter-grade credit he must then apply for full admission. Provisionally admitted students are not eligible for registration in the colloquia.

Course Requirements Minimum of 30 hours of approved graduate course work distributed as follows:

(1) two research seminars (6 hours), and two colloquia, if available, or suitable substitute (6 hours), all taken for letter-grade credit;

(2) six other courses (18 hours) as directed by the student's adviser.

If in the Department of History, some of these six courses may on recommendation of the advisor be taken for "S" credit. Part-time students shall take a minimum of 12 hours of these 18 hours for letter-grade credit. Courses taken outside the Department shall be for letter-grade credit.

Comprehensive Examinations One six-hour written comprehensive examination in one of the following "core" fields: History of Modern Western Europe (since the 15th century), U.S. History (including colonial), Russian and Eastern European History, Latin American History. An additional oral examination may be scheduled when further evaluation is necessary. In case of failure, a re-examination is subject to the discretion of the Department.

Other Requirements Proficiency examination in one foreign language. Thesis, or, at discretion of the Department, two substantial research papers written in

research seminars, each with the grade of *B*, that is, above *B* minus. The minimum cumulative grade average required to maintain good standing in the M.A. program is *B*, that is, above *B* minus with instructors' plus and minus notations taken into account.

Time-table Full-time students should complete all requirements for the M.A. in two semesters. A summer's grace is allowed to accommodate unusual circumstances. Part-time students should complete all requirements for the M.A. within three calendar years after entering the program.

Doctor of Philosophy

Admission Admission to the Ph.D. program is at the discretion of a departmental committee and is contingent upon the student's having an M.A. degree or its equivalent in history or in a related field (such as political science, economics, anthropology, sociology, literature, art, etc.,) with strength shown in history either on the undergraduate or graduate level. Completion of the Master's degree does not insure admission to the Ph.D. program. Full-time Ph.D. students must be prepared to complete all course, language, and comprehensive examination requirements by the end of the second academic year after entry into the Ph.D. program. In general, admission, especially for full-time students, is for the fall session. Entry into a graduate program in February while possible in some cases, will make for scheduling and time-table difficulties. A graduate degree in history cannot be achieved in summer sessions alone. Provisional admission may be extended in certain cases where the above standards for admission are not fully met. (See description in paragraph 1 above for further details).

Course Requirements A minimum of 42 hours of approved course work beyond the M.A. is required. At least 30 of the 42 hours must be completed in residence at The American University. Course work, over and above the 30 hours taken for the M.A., shall include but is not limited to the following: two research seminars and two colloquia, if available or suitable substitutes, for letter-grade credit (12 hours); six other courses selected by the student and his adviser, taken for "S" credit* or for letter-grade credit, according to Departmental advice; 12 hours of dissertation seminar. Courses taken outside of the Department of History shall be for letter-grade credit. Part-time students shall take a minimum of 24 of the 42 hours required for letter-grade credit.

Comprehensive Examinations Four written examinations which may include the M.A. examination taken at The American University on recommendation of the Department. The four examination fields are as follows:

- (1) the "core" examination field;
- (2) a specialized field in history outside the geographical area of the "core" field;
- (3) a related field outside history, or a specialized field in history;
- (4) another specialized field—the historical major—in history, within the area of the "core" field and within which field the student will write

his dissertation. Comprehensive fields will be chosen from the standard list printed below.

Oral examinations will be given in the "core" examination field when further evaluation is necessary, and in the dissertation field. In case of failure, a re-examination is subject to the discretion of the Department.

Other Requirements A reading knowledge of French and German is required. In some cases, one of these may be replaced by another language if germane to the candidate's research interests. Students in U. S. History are required to demonstrate proficiency in one language, either French, German or Spanish.*

All language requirements must be fulfilled by the beginning of the second year of full-time graduate work (end of second year for part-time students).

The minimum cumulative grade average required to maintain good standing in the Ph.D. program is *B*, that is, above *B* minus with instructors' minus and plus notations taken into account.

* All students entering the Ph.D. program after August, 1969, must meet a background requirement in two languages.

Dissertation An oral defense of dissertation is required.

Time-table Full-time students should finish all requirements for the Ph.D. within three calendar years after entering the Ph.D. program, or four years after beginning graduate work. Part-time students should complete all requirements within five calendar years after entering the Ph.D. program. All graduate students must be registered continuously, except for summer. (See the Required Graduate Study Registration elsewhere in this *Catalog*.)

Graduate Comprehensive CORE FIELDS:

Examination Fields 29.001 History of Modern Western Europe
29.002 History of the United States
29.003 History of Latin America
29.005 History of Russia and Eastern Europe

SPECIALIZED FIELDS:

29.010 History of Germany
29.011 History of France
29.012 History of England
29.013 History of Russia
29.014 History of the Middle East
29.015 History of China
29.016 History of Japan
29.017 History of the South and Southeast Asia
29.018 Renaissance and Reformation to 1609
29.18A Early Modern Europe (1609 to 1763)
29.019 The French Revolution and Napoleon (1763-1814)
29.020 History of Europe (1815-1914)
29.021 History of Europe since 1914
29.022 The U. S. Colonial Period, Revolution and Constitution
29.023 The Middle Period of U. S. History (1789-1850)*

- 29.024 Civil War and Reconstruction *
- 29.025 Recent United States History (since 1877)
- 29.026 The Colonial Origins of Latin America and the Achievement of Independence
- 29.027 Latin America since the Mid-19th Century
- 29.028 European Diplomatic History
- 29.029 European Intellectual History
- 29.030 U. S. Intellectual History
- 29.031 U. S. Diplomatic History
- 29.032 Latin American Intellectual History
- 29.033 Latin American Diplomatic History
- 29.057 Archival Administration

NOTES:

(1) The following fields have been eliminated for dissertation purposes. (They may still be offered as specialized fields for doctoral comprehensive examinations.)

History of China

History of Japan

History of South and Southeast Asia

Renaissance and Reformation

(2) The following field for study has been eliminated:

History of the Far East

(3) Fields in economic history are currently listed by the Department of Economics. Ph.D. candidates in History may choose one of these fields for comprehensive examination purposes.

UNDERGRADUATE COURSES

29.120 Selected Human Problems: Past and Present I (3)

Consideration of specific broad problems which have persistently manifested themselves in the past and which represent areas of tension in the present. Man's problems throughout time with reference to the *state* in its many forms; to *work*, wealth, and the interpersonal relations of earning a living; and to *nature*, with the development of science and technology and its effects on the environment.

21.121 Selected Human Problems: Past and Present II (3)

Consideration of specific broad problems which have persistently manifested themselves in the past and which represent areas of tension in the present. Man's problems throughout time with reference to *religion*, with the development of religious pluralism and intolerance; to *global involvement* from the imposition of Western dominance to the death of Europocentrism; and to *war*, both traditional and total, and to the concomitant search for peace.

29.310 The Ancient World (3)

The Ancient Near East to the Conquest of Alexander (330 B.C.): Egypt, Mesopotamia, Crete, Assyria, Persian Empires.

29.311 Medieval Europe (3)

Formative period of European civilization. Transition of social life and po-

* For students entering after September 1, 1968, these two fields will be combined, becoming 29.023 The Middle Period of U. S. History (1789-1877).

litical institutions from the Roman Empire to the age of European discover and exploration.

29.312 History of Modern Europe I (3)

Nature, causes, social consequences of the Reformation. Catholic Reformation. Evolution of political ideologies and institutions. Expansion of commerce and the growth of empires. French Revolution and the Age of Napoleon.

29.313 History of Modern Europe II (3)

Development of European nationalities from 1815 to the present. The age of Metternich, rise of liberalism, industrial revolution, and social, cultural and economic bases of nationalism and imperialism.

29.320 History of England I (3)

Political, economic, social, and cultural life in England to 1689. Origins and development of constitutional government. Beginnings of empire.

29.321 History of England II (3)

England and the British Empire since 1689. Evolution of constitutional government, expansion of empire, the empire system since World War II.

29.340 History of the U.S. I (3)

Survey course giving a comprehensive history of our country from colonial times to the Civil War.

29.341 History of the U.S. II (3)

Survey course covering period from the Civil War to the present.

29.443 Social History of the U.S. I (3)

Social factors in U.S. history from colonial times to the Civil War. Emphasis upon the family, labor, immigration, slavery, religion, the westward movement.

29.444 Social History of the U.S. II (3)

Analysis of American society since the Civil War with special attention to social classes and ethnic groups, urbanization, industrialism, technology, the social gospel, social welfare, and urban developments.

29.473 History of Latin America to 1860 (3)

Colonization by Spain, Portugal, and France. Causes and developments of independence movements. Political, social, economic and ideological aspects of national developments.

29.474 Latin America Since 1860 (3)

Economic nationalism, militarism, and reform movements. Cultural and religious developments.

29.482 Historiography (3)

Methods and materials of history and an introduction to the major historians from the Greeks to the present.

29.492 Undergraduate Seminar: U.S. History (3)

Introduction to methods and materials in historical research and writing, with special emphasis on resources in the Washington area.

29.492 Undergraduate Seminar: European and Other Areas (3)

ADVANCED COURSES

(500-level courses are open to graduate students and to advanced undergraduate students.* 600- and 700-level courses are open only to graduate students.)

* The department recommends that, as a prerequisite to these courses, advanced undergraduates have completed 6 hours in the general area of the course.

HISTORIOGRAPHY AND PHILOSOPHY OF HISTORY

29.504 Philosophy of History (3)

Contemporary issues in the philosophy of history with special attention to problems of meaning and structure in the historical process, considered in the light of their historical roots.

Prerequisite: Three hours of philosophy.

29.601 History of European Historical Writing (3)

Development of historiography from the period of the Renaissance. Trends in historical thinking, research and writing. Discussion of representative historical works.

29.603 Historical Writing in the U.S. (3)

Analysis of historical writing in the U. S. from colonial times. Attention to prominent historians and trends in historical thinking and interpretation.

ARCHIVES ADMINISTRATION

29.575 History of Archival Administration (3)

Introduction to the nature of archives and concepts of archival administration. A comparative survey of the history and present practice in the principal countries of the world, with special emphasis on the U.S.

29.576 Archival Administration: Modern Practice (3)

Evaluation, preservation, organization, storage, and use of archival materials. The design, installation, and management of archival systems. The application of automatic information handling systems and techniques.

EUROPE

29.507 The Renaissance (3)

A study of the period of transition from the medieval to the modern world. Considerable attention will be given to intellectual and cultural developments, particularly in Italy.

29.508 The Reformation (3)

The Lutheran revolt in Germany and the Reformation in Switzerland, France and England, with considerable emphasis on social and economic changes, and the religious wars up to the Peace of Westphalia.

29.509 The Age of Absolutism 1648-1763 (3)

The institutions and politics of absolute monarchy; the Age of Louis XIV, the Enlightened Despots, and The Age of Reason. Social, economic, and cultural developments will be treated, as well as the main political history of the period.

29.510 French Revolution and Napoleon (3)

European history from 1763 to 1814. Major aspects of the French Revolutionary and Napoleonic periods.

29.511 History of Europe: 1815-1870 (3)

Reaction, revolution, and reform from Metternich to Bismarck; industrialization and scientific progress; emergence of nationalism, liberalism, and socialism. From romanticism and idealism to positivism and realism.

29.512 History of Europe: 1870 to 1914 (3)

Political, economic, and cultural effects of nationalism, imperialism, and industrialization in Europe. National developments and international alliances. Background of the First World War.

29.513 Europe 1914-1939 (3)

Political, social, and economic developments in Europe from the beginning of the First World War to the outbreak of World War II.

- 29.514 Europe Since 1939 (3)**
The Second World War and its consequences: The Cold War and the emergence of Western Europe. Political, social, economic and cultural currents since World War II.
- 29.515 Expansion of Europe (3)**
Overseas expansion of European countries from the 15th through the 19th centuries. Influence of colonial and imperialistic expansion in shaping recent history.
- 29.516 Economic History of Modern Europe I (3)**
European economy from medieval times through the 18th century. Origins and growth of capitalism. Industrialism, colonialism; public credit and private finance; formation of national economies.
- 29.517 Economic History of Modern Europe II (3)**
Economic aspects of European industrial, national, and colonial development since the 18th century.
- 29.518 Diplomatic History of Europe I: 1789-1871 (3)**
Wars of the French Revolution and Napoleon; the Metternich Era; the revolutions of 1848-49; the unification of Italy and Germany.
- 29.519 Diplomatic History of Europe II: 1871-1939 (3)**
Continuation of 29.518, but may be taken as a separate course. Era of Bismarck; formation of alliances and counter-alliances; diplomacy of colonial imperialism; the First World War and the Versailles settlements; the totalitarian threat to the balance of power.
- 29.520 English Constitutional History (3)**
Development of English political institutions, practices, ideas. Emphasis on evolution of representative traditions rather than on political narrative.
- 29.521 History of England, 1789-1914 (3)**
The French Revolution: The Industrial Revolution and demands for reform; economic, social, and intellectual ideas in the 19th century: Change and disillusionment prior to World War I.
- 29.522 Britain: Empire and Commonwealth (3)**
Elizabethan extension: Mercantilism and competition for Empire. Imperial concepts in the 19th century leading to the "New Imperialism." The development of the commonwealth.
- 29.523 Tudor England (3)**
Political, cultural, economic and social development of England from the Wars of the Roses to 1603. Attention to foreign relations.
Prerequisites: 29.320 and 29.321 or equivalent.
- 29.524 Modern Revolutions (3)**
Theory of revolutionary movements and the form and structure of revolution as exemplified in the Puritan, American, French, and Russian revolutions.
- 29.525 France, 1815-1885 (3)**
Major stresses and strains in post-Revolutionary France. Bourbon Restoration and July Monarchy. Second Republic and Second Empire. Economic and social developments. Collapse of the Second Empire and inauspicious beginnings of the Third Republic. Renewed Monarchist offensive.
- 29.526 France Since 1885 (3)**
Defense and consolidation of the Third Republic. The Dreyfus Revolution, social problems, and the First World War. Grandeur and paralysis between the wars. Vichy, Resistance, and Liberation. The life and death of the Fourth Republic. The Fifth Republic.

- 29.528 History of Germany: 1500-1870 (3)**
A political, social, and cultural history from the Protestant Reformation to the unification of the German states under Bismarck.
- 29.529 Germany from Bismarck to Adenauer (3)**
The Second Reich, the Weimar Republic, and the Third Reich. Emphasis on the rise of National Socialism. The East and West German states since 1945.
- 29.530 History of Russia I (3)**
The eastern Slavs from the 10th century to the empire of Alexander II. Development of institutions and culture.
- 29.531 History of Russia II (3)**
Russia encounters industrialization and revolution, from the Emancipation to the Khrushchev era. Emphasis on internal political, socio-economic, and cultural developments.
- 29.532 History of East Central Europe I (3)**
From the Baltic to the Balkans. Political, economic and intellectual development to the 1870's.
- 29.533 History of East Central Europe II (3)**
Continuation of 29.532, since 1870's. May be taken as a separate course.
- 29.582 Intellectual History of Europe I: Through the Enlightenment (3)**
Ideas and outlooks that have influenced the development of western history from the 13th century to the eve of the French Revolution.
- 29.583 Intellectual History of Europe II: From the French Revolution (3)**
Cultural and intellectual currents from the end of the 18th century. Rise of the romantic movement; impact of revolutionary ideas, science, and industrial technology.

UNITED STATES

- 29.540 Colonial Origins of the U.S. (3)**
European backgrounds. Founding of the colonies. Political, economic, and social developments within the colonies to 1763.
- 29.541 Era of the American Revolution (3)**
Survey of colonial backgrounds. Origins and developments of the American Revolution. Drafting and establishment of the Constitution of the U. S.
- 29.542 The New Republic: 1789-1850 (3)**
The U. S. from 1789 to 1850. Social and political implications of the Jeffersonian and Jacksonian reform movements of the period. Growth of sectionalism.
- 29.543 Civil War and Reconstruction (3)**
Causes and course of the war; its impact on national life. Problems and effects of reconstruction. Industrialization and urbanization. Social and economic forces.
- 29.544 The Emergence of Modern America 1877-1919 (3)**
From Reconstruction to the end of the First World War.
- 29.545 Recent American History: 1920 to the Present (3)**
Continuation of 29.544.
- 29.546 The Frontier in U.S. History (3)**
Westward expansion from colonial times to the close of the 19th century. Analysis of Turner's frontier hypothesis in the light of recent critical literature.
- 29.548 American Economic History I (3)**
Review of American economic development from the colonial beginnings to the mid-19th century.

- 29.549 American Economic History II (3)**
Review of American economic development during the past one hundred years.
- 29.550 History of Industry in the U.S. (3)**
American industrial development from the end of the 18th century to the present. Structural and organizational aspects, location trends, technology, and distribution.
- 29.552 History of U.S. Foreign Policy I: 1776-1889 (3)**
Historical treatment and critical analysis of American Foreign Policy from the beginning to the end of the Post Civil War Era.
- 29.553 History of U.S. Foreign Policy II: 1889 to the Present (3)**
Continuation of 29.552 down to the present; the growing role of the U. S. in world affairs. May be taken separately from 29.552.
- 29.554 The South in U.S. History (3)**
Colonial times to the present. Factors making the South a distinctive part of the American nation.
- 29.587 Intellectual History of the U.S. I (3)**
Ideas and attitudes of the American people and their leaders from colonial times to the Civil War. Puritanism, the enlightenment, transcendentalism, democracy, and nationalism.
- 29.588 Intellectual History of the U.S. II (3)**
Dominant patterns of American thought from the Civil War to the present. Impact of Darwinian evolution, industrialism, the vanishing frontier, progressive democracy, imperialism, and war.
- 29.643 U.S. Expansion Abroad (3)**
Political and economic expansion of the U. S. in key areas such as Latin America and the Pacific. Ideological impact of American civilization in all parts of the world.

LATIN AMERICA

- 29.574 Diplomatic History of Latin America (3)**
History of the relations of the nations with each other, with nations of Europe, and with the United States, since independence. Principal attention to Argentina, Brazil, Chile, Mexico, Peru, Colombia and Venezuela.
- 29.673 Latin American Social and Political Thought (3)**
Spanish and Portuguese backgrounds. Ideas of the Independence leaders. Mid-century liberalism and romanticism. Positivist thought. Contemporary trends.

ASIA AND AFRICA

- 29.535 History of the Far East in Modern Times (3)**
Historical backgrounds; invasion of western influence; conflict of national interests; economic and cultural systems; Asiatic consciousness and world organization.
- 29.538 History of China Since the Ming Dynasty (3)**
Political and social institutions; schools of thought; legal and moral concepts; literary, artistic and intellectual developments; elements of stability and change; international contacts to recent times.
- 29.539 History of Japan: 1600 to the Present (3)**
Historical background; period of seclusion; restoration of a centralized monarchy; economic and political developments; establishment of an empire; World War II and postwar period.

- 29.561 History of the Middle East I (3)**
History of the area from the Hegira to the fall of Constantinople.
- 29.562 History of the Middle East II (3)**
History of the area from the fall of Constantinople to the present.
- 29.580 History of India I (3)**
India up to the European conquests. Attention to Hinduism and Islam as religious and social forces, caste and family of traditional India, and village life.
- 29.581 History of India II (3)**
Early European penetration and growth of British India Empire. 19th century social and intellectual developments. Growth of nationalism, to the present day. India's response to the Western impact.

COLLOQUIA

- 29.620 Colloquium in European History 1500-1789 (3)**
29.621 Colloquium in European History Since 1789 (3)
29.630 Colloquium in U.S. History (to 1865) (3)
29.631 Colloquium in U.S. History (since 1865) (3)
29.670 Colloquium in Latin American History I (3)
29.671 Colloquium in Latin American History II (3)

SEMINARS

- 29.710 Research Seminar in European History (3)**
29.730 Research Seminar in the History of the Far East (3)
29.740 Research Seminar in the History of the U.S. (3)
29.750 Research Seminar in the History of Latin America (3)
29.760 Research Seminar in the History of the Middle East (3)
29.770 Research Seminar in Archives Administration (3)
29.797 Master's Thesis Seminar (3-6)
29.799 Doctoral Dissertation Seminar (3-12)

SUMMER INSTITUTES

- 31.530 Institute of Genealogical Research (3)**
31.540 Institute in Archives Administration (3)

Divisional Courses

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses are open only to graduate students.)

- 81.506-M Development of Scientific Thought I (3)**
(Mathematical and Physical Sciences)
- 81.507-M Development of Scientific Thought II (3)**
(Biological and Social Sciences)
-

Hospital Training Program

WASHINGTON HOSPITAL CENTER

SUMNER O. BURHOE, *Coordinator*

The University provides the academic courses for students enrolled in the three year diploma program of the Washington Hospital Center. The schedule of courses is as follows:

- 45.101 Basic Physical Science (4)
- 45.102 Basic Biological Science (5)
- 45.105 Human Growth and Development (3)
- 23.100 Composition and Reading I (3)
- 23.101 Composition and Reading II (3)
- 57.200 General Psychology (3)
- 65.200 Introduction to Sociology (3)
- 21.320 Psychology of Education (3)
- 53.150 The U.S. Political System I (3)
- 19.100 Introduction to Economics I (3)

Inter-Departmental Science Program

Professor:

LEO CHUBERT, *Co-ordinator* (Department of Chemistry)

Faculties of the Departments of Biology, Chemistry, Earth Sciences, Mathematics, and Physics.

UNDERGRADUATE DEGREE Bachelor of Science in Distributed Science

The University offers a program leading to the degree of Bachelor of Science with a major in Distributed Sciences for students who plan to teach the natural sciences in secondary schools or who wish to receive a broader background in science at the undergraduate level than is afforded by the usual Bachelor of Science degree. The degree is also planned to meet pre-medical and pre-dental requirements of most medical and dental schools. Students majoring in distributed sciences select their major courses primarily from offerings in the fields of biology, chemistry, earth sciences, mathematics, and physics. Students interested in a program in distributed sciences should consult the chairman of the science department in which they select the 24 hours of major courses. The chairman of that department will assign an adviser early in the program. A minimum of 60 approved hours in the combined natural science/mathematics major and related courses must be completed to qualify for the degree of Bachelor of Science in Distributed Sciences.

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and Mathematics are normally satisfied by major and related requirements. Consult division chairman or appropriate department.	
	Social Science	(12 hours)

Language Requirement Through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Departmental Requirements **MAJOR COURSES** (24 hours)
At least 24 hours in one of the following: Biology, Chemistry, Earth Sciences, Mathematics or Physics

RELATED COURSES (36 hours)
Twelve hours in one additional science and eight hours in each of two additional sciences. (Where mathematics is selected certain courses are specified.) Eight additional hours needed to satisfy the university science requirements.

TOOL COURSES (6 hours)
41.110 Fundamentals of Mathematics
41.111 Analytic Geometry and Introduction to Calculus

Electives To complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREE

Master of Science in Science Teaching

The Master of Science in Science Teaching program is administered under the joint supervision of the Division of Natural Sciences and Mathematics and the Department of Education. Students interested in the M.S.S.T. program should consult the chairman of the science department in which they will take their major. The chairman of that department will assign an adviser.

Course Requirements A minimum of 30 hours of approved graduate work is required with six or more hours taken in the major field. The student's undergraduate and graduate courses in the major field must total a minimum of 32 credit hours. Other requirements include:

- (a) a minimum of eight hours in a second science field,
- (b) one year of college mathematics (algebra and analytic geometry or equivalent) taken either before entering the M.S.S.T. program or as non-credit courses along with the courses taken for graduate credit,
- (c) a course in either history or philosophy of science (3), and
- (d) six hours of graduate courses in education.

A limited number of courses (not to exceed 12 hours) from the 300 to 400 level may be used toward the requirements of this degree. These courses may be selected from:

9.321	15.320-321	27.341-342	41.474
9.332	15.350-351	41.310	51.330-331
9.335	15.400-401	41.312	51.410
9.341	15.460-461	41.321	51.450-451
9.356	27.321-322	41.322	
15.310-311	27.331-332	41.440	

Written Comprehensive Examinations Three, including two fields in the natural sciences and one field in education are required.

Languages and Linguistics

Professors:

JOHN G. FRANK (*Emeritus*)
HUGO J. MUELLER

Associate Professors:

VADIM MEDISH (*Chairman*)
RUBERTA M. OLDS (*Emeritus*)

Assistant Professors:

VERA Z. BERKOVEC
EDWARD I. BURKART
MARIE A. CHARBONNEAUX
JOHN D. CRONIN
JESSICA W. GOLDIN
MONIQUE S. KLEIN

GRACE S. MANCILL

HENRY M. NOEL
ELENI K. OKTAY
HUGO PINEDA
ROSEMARIE SAAL
PILAR G. SAENZ
BRUNO STEINBRUCKNER
MONIQUE DE JONG WARD
KATHRYN DAY WYATT
ZOE WYTHE

Instructors:

MARIANO GOWLAND
ZUZEL C. HOLCOMB

Professorial Lecturers:

JULIA BILLINGS
BORIS FILIPOFF
NEIL ANN S. LEVINE
B. KIRK RANKIN, III

Lecturers:

SUPAJEE LAPCHAROEN
CHANG-SU SWANSON
EDDIE TOK SENG YO

UNDERGRADUATE DEGREE

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non credit)
	Humanities are normally satisfied by major and related requirements.	
	Consult department.	(12 hours)
	Science and Mathematics	(12 hours)
	Social Science	(12 hours)

Bachelor of Arts in French, German, Russian, or Spanish

Prerequisite Requirements	Completion is required of four-credit-hour per semester language courses on the elementary and intermediate level. Requirements of elementary and intermediate language course work may be waived if high school or other preparation warrants it. A minimum of 29 hours of course work is required, specifically:	
	Introduction to Language (3)	

Advanced Language I and II (4-4)

Advanced Reading and Composition I and II (3-3)

Civilization I and II (3-3)

Pro-Seminar in Literature I and II (3-3)

In addition, 12 hours of related courses must be chosen from:

Advanced literature in the major language, linguistics, a second foreign language, education, history, or English.

Departmental Examination An oral comprehensive examination of approximately one hour's duration before an appointed committee is required. The Graduate Record Examination is optional.

Electives are required to complete minimum of 120 hours plus non-credit physical education.

Bachelor of Arts in Languages and Area Studie

(Administered jointly with the School of International Service—See pp. 383)

Area Programs The following programs are available:

- (A) Russian & USSR and East Europe Area
- (B) Spanish & Latin America Area
- (C) French or German & West Europe Area
- (D) Hindi or Indonesian or Thai & South and Southeast Asia Area
- (E) Chinese or Japanese & Far East Area

REQUIREMENTS FOR PROGRAMS (A), (B) AND (C):

Prerequisites Two years of four-meetings-per-week of the appropriate language or equivalent are required.

Required Courses Required are 35 hours in the following course areas:

- Advanced Language I and II (4-4)
- Advanced Reading and Composition I and II (3-3)
- Civilization (of area) I and II (3-3)
- Introduction to World Politics I and II (3-3)
- Three approved area subject courses, seminars or colloquia (3-3-3)

Related Courses Required are 12 hours in the following fields:

- Second language of the area
- International relations of the area
- Government and Politics
- Literature of the area
- History of the area
- Linguistics
- Geography of the area
- Economic problems of the area

Examination An oral comprehensive examination to test language competence and knowledge of the area is required. The Graduate Record Examination is optional.

Electives It is necessary to complete a minimum of 120 hours plus non-credit physical education.

REQUIREMENTS FOR PROGRAMS (D) AND (E):

- Required Courses** Required are 36 hours in the following course work:
Elementary Language I and II (4-4)
Intermediate Language I and II (4-4)
Advanced Language I and II (4-4)
Introduction to World Politics I and II (3-3)
Two approved area subject courses or seminars (3-3)
- Related Courses** Also required are 12 hours in the following fields:
Second language of the area
Government and Politics
Intermediate and/or Advanced year of a European language
International relations of the area
History of the area
Linguistics
Geography of the area
Economics of the area
- Examination** An oral comprehensive examination to test language competence and knowledge of the area is required. The Graduate Record Examination is optional.
- Electives** It is necessary to complete a minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

Master of Arts in French, German, Russian, Spanish

- Prerequisite** Required is proficiency in the appropriate language and literature demonstrated either by a B.A. degree in that field of study or equivalent preparation.

- Course Requirements** A minimum of 30 hours of approved graduate work is required, including:

PROGRAM "A" WITH EMPHASIS ON LITERATURE AND LINGUISTICS

Nine credit hours in the appropriate literature. The choice of courses is to be determined in consultation with an adviser in literature.

Twelve credit hours in linguistics. The choice of courses depends on the selection of the concentration field for comprehensive examinations and is to be determined in consultation with an adviser in linguistics.

Nine credit hours in one of the following options:

1. *Thesis*: One 700-level literature seminar (3) and thesis (6).
2. *Non-Thesis*: Three 700-level seminars (3-3-3), two of which must be in the appropriate literature and one in linguistics or vice versa.

- Qualifying Examination** A general oral examination to be taken after completion of the *core* courses and prior to application for written comprehensive examinations is required.

- Comprehensive Examinations** Required examinations include:
 One written examination in the appropriate literature; and
 One written examination in (a) Applied Linguistics or, (b) Language Structure.

PROGRAM "B" WITH EMPHASIS ON LITERATURE AND A RELATED SUBJECT

At least twelve credit hours in the appropriate literature (500-level courses) are required.

Nine credit hours in one 700-level literature seminar (3) and thesis (6) are required.

The required number of credit hours (normally 9) in an approved related field (500-level courses) such as Philology, Second Foreign Literature, Area Studies, History, etc., are requisite.

- Qualifying Examination** A general oral examination to be taken after completion of the *core* courses and prior to application for written comprehensive examination is required.

- Comprehensive Examinations** Required examinations include:
 One written examination in the appropriate literature;
 One written examination in the related field; and
 Oral defense of the thesis.
 See the list of fields on page 158.

Master of Arts in Linguistics

- Prerequisite** A Bachelor's degree with a minimum of two years in a modern foreign language or its equivalent is prerequisite.

- Course Requirements** A minimum of 30 hours of approved graduate work is required, including:

General Linguistics 15 credits

Either one of the following:

Applied Linguistics 6 credits

Formal Linguistics 6 credits

Thesis or non-thesis option (one of the following):

Thesis plus *one* Seminar in Linguistics 9 credits

Case Study plus *two* Seminars in Linguistics 9 credits

Three Seminars in Linguistics 9 credits

In some special instances seminar or course substitutions may be permitted after consultation with your regular academic adviser, or the Department Chairman.

- Qualifying Examination** An oral examination is to be taken after completion of the *core* courses and prior to application for written comprehensive examinations.

- Comprehensive Examinations** *Examinations include:*
 37.001 General Linguistics (To be taken by all students).

Either one of the following:

37.002 Applied Linguistics

37.003 Formal Linguistics

Other examination fields listed on page 158.

Master of Arts in Languages and Area Studies

(Administered jointly with the School of International Service—See pp. 383)

The programs available are:

- (A) Russian & USSR and East Europe Area
- (B) Spanish & Latin America
- (C) French or German & West Europe Area
- (D) Hindi or Indonesian or Thai & South and Southeast Asia Area
- (E) Chinese or Japanese & Far East Area

PROGRAMS (A), (B) AND (C):

Prerequisite The B.A. or its equivalent is prerequisite. The student's background must have included three years of the appropriate language and one year (6 credits) of history, politics, geography or other area subject.

Required Courses A total of 30 hours of approved graduate work exclusive of deficiencies assessed at the time of admission is required.

Also required are 12 hours in literature and/or area subject courses taught in a language of the area; and

12 hours in area subject courses taught in English in the School of International Service, Department of History, Department of Economics, or other.

Research Requirement A thesis, credited with from three to six semester hours of the 30 required for the degree, or two substantial research projects (non-thesis option) is prepared in conjunction with .600 and .700 level seminars, or two independent research projects (.690) or a combination of these. Students must apply for the non-thesis option in the Office of the Dean of the School of International Service at the beginning of the semester in which the paper is written.

Qualifying Examination An oral examination is required to evaluate candidate's readiness for written comprehensive examinations.

Comprehensive Examinations Two written examinations are required in the selected fields of concentration.

PROGRAMS (D) AND (E):

Prerequisite The B.A. or its equivalent is prerequisite. The student's background must have included at least two years of the appropriate language and one year (6 credits) of history, politics, geography or other area subject.

Required Courses Required are 6 hours in literature and/or area subject courses taught in a language of the area; and
18 hours in area subject courses taught in English in the School of International Service, Department of History, Department of Economics, or other. With special permission, up to 6 hours may be earned by taking the third (Advanced) year of an appropriate area language.

Research Requirement A thesis, credited with from 3 to 6 semester hours of the 30 required for the degree, or two substantial research projects (non-thesis option)

is prepared in conjunction with .600 and .700 level seminars, or two independent research projects (690) or a combination of these. Students must apply for the non-thesis option in the Office of the Dean of the School of International Service at the beginning of the semester in which the paper is written.

Qualifying Examination An oral examination is required to evaluate candidate's readiness for written comprehensive examinations.

Comprehensive Examinations Two written examinations are required in the selected fields of concentration.

FIELDS FOR WRITTEN COMPREHENSIVE EXAMINATIONS:

37.001 General Linguistics (Presupposes these core courses: 37.500, 37.502, 37.503, and 37.505 or 37.605).

37.002 Applied Linguistics (Presupposes these core courses: 37.500, 37.507, and 37.508 or Foreign Language Teachers' Institute).

37.003 Formal Linguistics (Presupposes these core courses: 37.509 and 37.600).

37.004 Philology (Presupposes these core courses: 37.505 and 37.606).

37.011 French Structure (Presupposes these core courses: 37.500, 37.520, 37.521).

37.012 German Structure (Presupposes these core courses: 37.500, 37.530, 37.531).

37.013 Russian Structure (Presupposes these core courses: 37.500, 37.540, 37.541).

37.014 Spanish Structure (Presupposes these core courses: 37.500, 37.550, 37.551).

37.021 French Literature:

37.022 German Literature:

37.023 Russian Literature:

37.024 Spanish Literature:

37.025 Latin-American Literature:

37.021-37.025 require selected courses with emphasis on particular authors, movements, periods or literary forms.

UNDERGRADUATE COURSES

Courses are listed in alphabetical sequence.

Academic credit may not be earned for language courses below the level already completed by the student elsewhere, including high school.

Credit is given for the first semester of an elementary or intermediate language course only upon the successful completion of the second semester. In all language courses, students are expected to do individual language laboratory work outside of class.

37.175 Arabic, Elementary I (4)*

Emphasis on audio-lingual skills. Drills on the main features of classical Arabic structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.

* Available only through Consortium of Universities.

- 37.176 Arabic, Elementary II (4)***
Continuation of 37.175.
Prerequisite: 37.175 or equivalent.
- 37.185 Chinese, Elementary I (4)***
Emphasis on audio-lingual skills. Drills on the main features of Mandarin structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.
- 37.186 Chinese, Elementary II (4)***
Continuation of 37.185.
Prerequisite: 37.185 or equivalent.
- 37.002 French, Reading for Research (0)**
This course is designed to prepare graduate students for written language tool examinations.
Prerequisite: One year college French or equivalent.
- 37.120 French, Elementary I (4)**
Emphasis on audio-lingual skills. Intensive drills on the main features of structure. Emphasis on pronunciation and fluency in common speech situations. Inductive presentation of grammar. Basic vocabulary. Five clock hours per week of class instruction.
- 37.121 French, Elementary II (4)**
Continuation of 37.120.
Prerequisite: 37.120 or equivalent.
- 37.220 French, Intermediate I (4)**
Audio-lingual skills as well as reading and writing. Copious drills. Text material focused on cultural patterns. Five clock hours per week of class instruction.
Prerequisite: 37.121 or equivalent.
- 37.221 French, Intermediate II (4)**
Continuation of 37.220.
Prerequisite: 37.220 or equivalent.
- 37.222 French, Intermediate Reading I (3)**
Development of reading and comprehension skills. Text material focused on natural and social sciences.
Prerequisite: One year college French or equivalent.
- 37.223 French, Intermediate Reading II (3)**
Continuation of 37.222.
Prerequisite: 37.222 or equivalent.
- 37.320 French, Advanced I (4)**
Perfection of audio-lingual skills. Progression from controlled conversation to free speech. Systematic exercises on style. Idioms. Semantic problems. Five clock hours per week of class instruction.
Prerequisite: 37.221 or equivalent.
- 37.321 French, Advanced II (4)**
Continuation of 37.320.
Prerequisite: 37.320 or equivalent.
- 37.322 French, Advanced Reading and Composition I (3)**
Perfection of reading and writing skills, with special emphasis on composition. Systematic exercises on style.
Prerequisite: 37.223 or equivalent.

- 37.323 French, Advanced Reading and Composition II (3)**
Continuation of 37.322.
Prerequisite: 37.322 or equivalent.
- 37.420 French Civilization I (3)**
Selected cultural topics. Emphasis on the contemporary scene.
Prerequisite: Three years college French or equivalent.
- 37.421 French Civilization II (3)**
Selected cultural topics. Emphasis on the historical development.
Prerequisite: Three years college French or equivalent.
- 37.422 French, Pro-Seminar in Literature I (3)**
Conducted as a discussion group with emphasis on selected topics and individual problems. The course is conducted in French.
Prerequisite: Three years college French or equivalent.
- 37.423 French, Pro-Seminar in Literature II (3)**
Same as 37.422, with different topics.
Prerequisite: Three years college French or equivalent.
- 37.003 German, Reading for Research (0)**
This course is designed to prepare graduate students for written language tool examinations.
Prerequisite: One year college German or equivalent.
- 37.130 German, Elementary I (4)**
Emphasis on audio-lingual skills. Intensive drills on the main features of structure. Emphasis on pronunciation and fluency in common speech situations. Inductive presentation of grammar. Basic vocabulary. Reading and writing as auxiliary skills. Five clock hours per week of class instruction.
- 37.131 German, Elementary II (4)**
Continuation of 37.130.
Prerequisite: 37.130 or equivalent.
- 37.230 German, Intermediate I (4)**
Audio-lingual skills as well as reading and writing. Copious drills. Text material focused on cultural patterns. Five clock hours per week of class instruction.
Prerequisite: 37.131 or equivalent.
- 37.231 German, Intermediate II (4)**
Continuation of 37.230.
Prerequisite: 37.230 or equivalent.
- 37.232 German, Intermediate Reading I (3)**
Development of reading and comprehension skills. Text material focused on natural and social sciences.
Prerequisite: One year college German or equivalent.
- 37.233 German, Intermediate Reading II (3)**
Continuation of 37.232.
Prerequisite: 37.232 or equivalent.
- 37.330 German, Advanced I (4)**
Perfection of audio-lingual skills. Progression from controlled conversation to free speech. Systematic exercises on style. Idioms. Semantic problems. Five clock hours per week of class instruction.
Prerequisite: 37.231 or equivalent.
- 37.331 German, Advanced II (4)**
Continuation of 37.330.
Prerequisite: 37.330 or equivalent.

- 37.332 German, Advanced Reading and Composition I (3)**
Perfection of reading and writing skills, with special emphasis on composition. Systematic exercises on style.
Prerequisite: 37.233 or equivalent.
- 37.333 German, Advanced Reading and Composition II (3)**
Continuation of 37.332.
Prerequisite: 37.332 or equivalent.
- 37.430 German Civilization I (3)**
A survey of German civilization from the beginning of the Christian era to the end of the 17th century. The course is conducted in German.
Prerequisite: Three years college German or equivalent.
- 37.431 German Civilization II (3)**
A survey of German civilization from the beginning of the 18th century to the present time. The course is conducted in German.
Prerequisite: Three years college German or equivalent.
- 37.432 German, Pro-Seminar in Literature I (3)**
Conducted as a discussion group with emphasis on selected topics and individual problems. The course is conducted in German.
Prerequisite: Three years college German or equivalent.
- 37.433 German, Pro-Seminar in Literature II (3)**
Same as 37.432, with different topics.
Prerequisite: Three years college German or equivalent.
- 37.190 Greek, Elementary Ancient I (3)**
Presentation and drill of Greek structure. Basic vocabulary. Development of reading knowledge. Introduction to the position of Greek within the Indo-European family of languages.
- 37.191 Greek Elementary Ancient II (3)**
Continuation of 37.190.
Prerequisite: 37.190 or equivalent.
- 37.290 Greek, Intermediate Ancient I (3)**
Study of forms and syntax with oral and written drills. Work with tapes in the language laboratory. Reading from classical authors (Plato, Homer).
Prerequisite: One year college Greek or equivalent.
- 37.291 Greek, Intermediate Ancient II (3)**
Continuation of 37.290.
Prerequisite: 37.290 or equivalent.
- 37.195 Hindi, Elementary I (4)**
Emphasis on audio-lingual skills. Intensive drills on the main features of Hindi structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.
- 37.196 Hindi, Elementary II (4)**
Continuation of 37.195.
Prerequisite: 37.195 or equivalent.
- 37.295 Hindi, Intermediate I (4)**
Emphasis on further development of audio-lingual skills and on the main features of Hindi structure. Further development of reading and writing skills, and introduction to the culture. Five clock hours per week of class instruction.
Prerequisite: One year college Hindi or equivalent.
- 37.296 Hindi, Intermediate II (4)**
Continuation of 37.295.
Prerequisite: 37.295 or equivalent.

- 37.395 Hindi, Advanced I (4)***
Audio-lingual skills as well as reading and writing. Systematic exercises on style. Idioms. Semantic problems. Five clock hours per week of class instruction.
Prerequisite: Two years college Hindi or equivalent.
- 37.396 Hindi, Advanced II (4)***
Continuation of 37.395.
Prerequisite: 37.395 or equivalent.
- 37.115 Indonesian, Elementary I (4)**
Emphasis on audio-lingual skills. Intensive drills on the main features of Indonesian structure. Inductive presentation of grammar. Active vocabulary. Introduction to reading and writing. Five clock hours per week of class instruction.
- 37.116 Indonesian, Elementary II (4)**
Continuation of 37.115.
Prerequisite: 37.115 or equivalent.
- 37.215 Indonesian, Intermediate I (4)**
Emphasis on further development of audio-lingual skills and on the main features of Indonesian structure. Further development of reading and writing skills, and introduction to the culture. Five clock hours per week of class instruction.
Prerequisite: One year college Indonesian or equivalent.
- 37.216 Indonesian, Intermediate II (4)**
Continuation of 37.215.
Prerequisite: 37.215 or equivalent.
- 37.315 Indonesian, Advanced I (4)***
Audio-lingual skills as well as reading and writing. Systematic exercises on style. Idioms. Semantic problems. Five clock hours per week of class instruction.
Prerequisite: Two years college Indonesian or equivalent.
- 37.316 Indonesian, Advanced II (4)***
Continuation of 37.315.
Prerequisite: 37.315 or equivalent.
- 37.165 Japanese, Elementary I (4)**
Emphasis on audio-lingual skills. Intensive drills on the main features of Japanese structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.
- 37.166 Japanese, Elementary II (4)**
Continuation of 37.165.
Prerequisite: 37.165 or equivalent.
- 37.265 Japanese, Intermediate I (4)**
Emphasis on further development of audio-lingual skills and on the main features of Japanese structure. Further development of reading and writing skills, and introduction to the culture. Five clock hours per week of class instruction.
Prerequisite: One year college Japanese or equivalent.
- 37.266 Japanese, Intermediate II (4)**
Continuation of 37.265.
Prerequisite: 37.265 or equivalent.

* Not available 1968-69.

- 37.365 Japanese, Advanced I (4)***
Audio-lingual skills as well as reading and writing. Systematic exercises on style. Idioms. Semantic problems. Five clock hours per week of class instruction.
Prerequisite: Two years college Japanese or equivalent.
- 37.366 Japanese, Advanced II (4)***
Continuation of 37.365.
Prerequisite: 37.365 or equivalent.
- 37.107 Korean, Elementary I (4)***
Emphasis on audio-lingual skills. Drills on the main features of Korean structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.
- 37.108 Korean, Elementary II (4)***
Continuation of 37.107.
Prerequisite: 37.107 or equivalent.
- 37.300 Language, Introduction to (3)**
The nature of language. The field of linguistics. Languages of the world. Linguistic terminology.
- 37.192 Latin, Elementary I (3)**
Presentation and drill of Latin structure. Basic vocabulary. Development of reading knowledge. Introduction to the position of Latin within the Indo-European family of languages.
- 37.193 Latin, Elementary II (3)**
Continuation of 37.192.
Prerequisite: 37.192 or equivalent.
- 37.292 Latin, Intermediate I (3)**
Study of forms and syntax with oral and written drills. Readings from classical authors (Caesar, Tacitus, Ovidius, Virgil and others).
Prerequisite: One year college Latin or equivalent.
- 37.293 Latin, Intermediate II (3)**
Continuation of 37.292.
Prerequisite: 37.292 or equivalent.
- 37.004 Russian, Reading for Research (0)**
This course is designed to prepare graduate students for written language tool examinations.
Prerequisite: One year college Russian or equivalent.
- 37.140 Russian, Elementary I (4)**
Emphasis on audio-lingual skills. Intensive drills on the main features of structure. Emphasis on pronunciation and fluency in common speech situations. Inductive presentation of grammar. Basic vocabulary. Reading and writing as auxiliary skills. Five clock hours per week of class instruction.
- 37.141 Russian, Elementary II (4)**
Continuation of 37.140.
Prerequisite: 37.140 or equivalent.
- 37.240 Russian, Intermediate I (4)**
Audio-lingual skills as well as reading and writing. Copious drills. Text material focused on cultural patterns. Five clock hours per week of class instruction.
Prerequisite: 37.141 or equivalent.

* Not available 1968-69.

- 37.241 Russian, Intermediate II (4)**
Continuation of 37.240.
Prerequisite: 37.240 or equivalent.
- 37.242 Russian, Intermediate Reading I (3)**
Development of reading and comprehension skills. Text material focused on natural and social sciences.
Prerequisite: One year college Russian or equivalent.
- 37.243 Russian, Intermediate Reading II (3)**
Continuation of 37.242.
Prerequisite: 37.242 or equivalent.
- 37.340 Russian, Advanced I (4)**
Perfection of audio-lingual skills. Progression from controlled conversation to free speech. Systematic exercises on style. Idioms. Semantic problems. Five clock hours per week of class instruction.
Prerequisite: 37.241 or equivalent.
- 37.341 Russian, Advanced II (4)**
Continuation of 37.340.
Prerequisite: 37.340 or equivalent.
- 37.342 Russian, Advanced Reading and Composition I (3)**
Perfection of reading and writing skills, with special emphasis on composition. Systematic exercises on style.
Prerequisite: 37.243 or equivalent.
- 37.343 Russian, Advanced Reading and Composition II (3)**
Continuation of 37.342.
Prerequisite: 37.342 or equivalent.
- 37.440 Russian Civilization I (3)**
A survey of Russian civilization from Kiev Rus period to the 1860's. The course is conducted in Russian.
Prerequisite: Three years college Russian, or equivalent.
- 37.441 Russian Civilization II (3)**
A survey of Russian civilization from the 1860's to the present time. The course is conducted in Russian.
Prerequisite: Three years college Russian or equivalent.
- 37.442 Russian, Pro-Seminar in Literature I (3)**
Conducted as a discussion group with emphasis on selected topics and individual problems. The course is conducted in Russian.
Prerequisite: Three years college Russian or equivalent.
- 37.443 Russian, Pro-Seminar in Literature II (3)**
Same as 37.442, with different topics.
Prerequisite: Three years college Russian or equivalent.
- 37.100 Serbo-Croatian, Elementary I (4)***
Emphasis on audio-lingual skills. Drills on the main features of Serbo-Croatian structure. Inductive presentation of grammar. Active vocabulary. Five clock hours per week of class instruction.
- 37.101 Serbo-Croatian, Elementary II (4)***
Continuation of 37.100.
Prerequisite: 37.100 or equivalent.
- 37.200 Serbo-Croatian, Intermediate I (4)***
Emphasis on further development of audio-lingual skills and on the main features of Serbo-Croatian structure. Further development of reading and

* Not available 1968-69.

writing skills and introduction to the culture. Five clock hours per week of class instruction.

Prerequisite: 37.101 or equivalent.

37.201 Serbo-Croatian, Intermediate II (4)*

Continuation of 37.200.

Prerequisite: 37.200 or equivalent.

37.005 Spanish, Reading for Research (0)

This course is designed to prepare graduate students for written language tool examinations.

Prerequisite: One year college Spanish or equivalent.

37.150 Spanish, Elementary I (4)

Emphasis on audio-lingual skills. Intensive drills on the main features of structure. Emphasis on pronunciation and fluency in common speech situations. Inductive presentation of grammar. Basic vocabulary. Reading and writing as auxiliary skills. Five clock hours per week of class instruction.

37.151 Spanish, Elementary II (4)

Continuation of 37.150.

Prerequisite: 37.150 or equivalent.

37.250 Spanish, Intermediate I (4)

Audio-lingual skills as well as reading and writing. Copious drills. Text material is focused on cultural patterns. Five clock hours per week of class instruction.

Prerequisite: One year college French or equivalent.

37.251 Spanish, Intermediate II (4)

Continuation of 37.250.

Prerequisite: 37.250 or equivalent.

37.252 Spanish, Intermediate Reading I (3)

Development of reading and comprehension skills. **Text** material focused on natural and social sciences.

Prerequisite: One year college Spanish or equivalent.

37.253 Spanish, Intermediate Reading II (3)

Continuation of 37.252.

Prerequisite: 37.252 or equivalent.

37.350 Spanish, Advanced I (4)

Perfection of audio-lingual skills. Progression from controlled conversation to free speech. Systematic exercises on style. Idioms. Semantic problems. Five clock hours per week of class instruction.

Prerequisite: 37.251 or equivalent.

37.351 Spanish, Advanced II (4)

Continuation of 37.350.

Prerequisite: 37.350 or equivalent.

37.352 Spanish, Advanced Reading and Composition I (3)

Perfection of reading and writing skills, with special emphasis on composition. Systematic exercises on style.

Prerequisite: 37.253 or equivalent.

37.353 Spanish, Advanced Reading and Composition II (3)

Continuation of 37.352.

Prerequisite: 37.352 or equivalent.

37.450 Spanish (Hispanic) Civilization I (3)

A survey of Hispanic civilization from Roman times to the end of the 17th century. The course is conducted in Spanish.

Prerequisite: Three years college Spanish or equivalent.

* Not available 1968-69.

- 37.451 Spanish (Hispanic) Civilization II (3)**
A survey of Hispanic civilization from the 18th century to the present. The course is conducted in Spanish.
Prerequisite: Three years college Spanish or equivalent.
- 37.452 Spanish, Pro-Seminar in Literature I (3)**
Conducted as a discussion group with emphasis on selected topics and individual problems. The course is conducted in Spanish.
Prerequisite: Three years college Spanish or equivalent.
- 37.453 Spanish, Pro-Seminar in Literature II (3)**
Same as 37.452, with different topics.
Prerequisite: Three years college Spanish or equivalent.
- 37.109 Tamil, Elementary I (4)***
Emphasis on audio-lingual skills. Drills on the main features of Tamil structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.
- 37.110 Tamil, Elementary II (4)***
Continuation of 37.109.
Prerequisite: 37.109 or equivalent.
- 37.105 Thai, Elementary I (4)**
Emphasis on audio-lingual skills. Intensive drills on the main features of Thai structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.
- 37.106 Thai, Elementary II (4)**
Continuation of 37.105.
Prerequisite: 37.105 or equivalent.
- 37.205 Thai, Intermediate I (4)***
Emphasis on further development of audio-lingual skills and on the main features of Thai structure. Further development of reading and writing skills, and introduction to the culture. Five clock hours per week of class instruction.
Prerequisite: One year college Thai or equivalent.
- 37.206 Thai, Intermediate II (4)***
Continuation of 37.205.
Prerequisite: 37.205 or equivalent.
- 37.305 Thai, Advanced I (4)***
Audio-lingual skills as well as reading and writing. Systematic exercises on style. Idioms. Semantic problems. Five clock hours of class instruction.
Prerequisite: Two years college Thai or equivalent.
- 37.306 Thai, Advanced II (4)***
Continuation of 37.305.
Prerequisite: 37.305 or equivalent.
- 37.111 Vietnamese, Elementary I (4)***
Emphasis on audio-lingual skills. Drills on the main features of Vietnamese structure. Inductive presentation of grammar. Active vocabulary. Introduction to the writing system. Five clock hours per week of class instruction.
- 37.112 Vietnamese, Elementary II (4)***
Continuation of 37.111.
Prerequisite: 37.111 or equivalent.

* Not available 1968-69.

ADVANCED COURSES

500-level courses are open to graduate students and advanced undergraduates; 600 and 700-level courses are open only to graduate students. Prerequisite for admission to all advanced courses: permission of the instructor unless otherwise specified.

37.500 Principles of Linguistics I (3)

Introduction to the scientific study of language, with emphasis on structural linguistics. Attitudes of the linguistic scientist. Reading, problems, and class discussions.

Prerequisite: Permission of instructor.

37.501 Principles of Linguistics II (3)

Introduction to the study of language change, the classification of languages, and linguistic reconstruction. Readings, problems, and class discussions.

Prerequisite: Permission of instructor.

37.502 Linguistic Structure I: Phonetics and Phonemics (3)

Phonetics and phonemics. Techniques of describing speech sounds in terms of articulatory movements and formulas. Practice in hearing and transcribing phonetic sounds, using tape recordings. Basic premises underlying phonemic analysis and practical procedures for arriving at the phonemes of a language.

Prerequisite: Permission of instructor.

37.503 Linguistic Structure II: Morphology and Syntax (3)

Morphology and syntax. The identification of morphemes; morphophonemics; morpheme classes and distribution; problems in the classification and description of morphological data. Componential analysis of utterances; form classes; immediate constituents. Introduction to string constituent analysis and transformations.

Prerequisite: Permission of instructor.

37.505 History of Linguistics (3)

Linguistic theories from the Greeks to modern times. Great linguists and their schools of thought. Development of American linguistics.

Prerequisite: Permission of instructor.

37.507 Applied Linguistics: Methodology of Foreign Language Teaching (3)

Principles underlying the structural method of language teaching. Application of linguistics in the preparation of teaching materials. Planning of courses. Audio-visual aids.

Prerequisite: Permission of instructor

37.508 Teaching English as a Foreign Language (3)

Methods of teaching English as a foreign language; development of teaching materials; discussion of textbooks; lesson planning; problems of the foreign student. A considerable portion of the course is devoted to practical work; writing materials and presenting them orally for class critique. Students visit actual EFL classes.

Prerequisite: Permission of instructor.

37.509 Theory and Construction of Grammars (3)

Emphasis is on the construction of grammars as defining devices to characterize languages. Automata equivalent to various types of grammars are considered, as well as mathematical relations among grammars. Types of languages considered are mathematical, logical, computational and two-dimensional, in addition to natural language.

Prerequisite: Permission of instructor.

- 37.520 French Structure (3)**
A contemporary and historical analysis of the phonology, morphology, and syntax of French.
Prerequisite: Permission of instructor.
- 37.521 History of the French Language (3)**
Study of the French language through various stages of its development.
Prerequisite: Permission of instructor.
- 37.522 French Stylistics (3)**
Word choice and word grouping. Figurative speech. Rhetorical figures. Grammatical elements of style. Style levels.
Prerequisite: Permission of instructor.
- 37.523 French Romanticism (3)**
Development of the Romantic movement in early 19th century French literature. Analysis of sentiments of the romanticists.
Prerequisite: Permission of instructor.
- 37.524 French Realism (3)**
19th century French literature from decline of romanticism to turn of century. Periods of expression known as realism, naturalism, and symbolism.
Prerequisite: Permission of instructor.
- 37.525 Contemporary French Literature (3)**
Course content changes each semester; emphasis on (a) Noval, or (b) Drama, or (c) Poetry. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.526 The French Renaissance (3)**
Renaissance and humanistic movement in France in the 16th century. Rabelais, the *Pléiade*, Ronsard, Montaigne.
Prerequisite: Permission of instructor.
- 37.527 Eighteenth Century France: Men and Ideas (3)**
Attitudes and ideas of the age of enlightenment as reflected in Montesquieu, Diderot, the Encyclopedists, Voltaire, and Rousseau.
Prerequisite: Permission of instructor.
- 37.530 German Structure and Problems in Teaching German (3)**
Problems in a descriptive analysis of the German structure, and the impact of new linguistic findings on the practice of teaching German.
Prerequisite: Permission of instructor.
- 37.531 History of the German Language (3)**
A complete survey of the historic development of the German language. The student is introduced to the scholarly methods applied in diachronic linguistics.
Prerequisite: Permission of instructor.
- 37.532 German Stylistics (3)**
Course deals with the phenomenon of style in general and German style features in particular. The purpose of the course is to familiarize the student in theory with what constitutes style levels in non-artistic usage and also to make him recognize the elements of style in literary works of art.
Prerequisite: Permission of instructor.
- 37.533 Topics, Motifs and Conventions in German Literature (3)**
Understanding and application of modern theoretical aspects reflecting present day thinking in German literary criticism.
Prerequisite: Permission of instructor.
- 37.535 German Literature in the Middle Ages (3)**
Mediaeval literature in Germany from approximately 900 to 1400 A.D.

Covers a period vital to the understanding of German intellectual development.

Prerequisite: Permission of instructor.

37.536 German Literature of the 17th and 18th Century (3)

Course content alternates between (a) Barock period, and (b) Lessing and his time. Course may be taken for credit twice.

Prerequisite: Permission of instructor.

37.537 Classical Period in German Literature (3)

Course content alternates between (a) Goethe and his time, and (b) Schiller and his time. Course may be taken for credit twice.

Prerequisite: Permission of instructor.

37.538 Nineteenth Century German Literature (3)

From Romanticism to Realism and subsequent developments to the beginning of World War I. Selected representatives such as Heine, Keller, Storm, Stifter, Fontane, the Naturalists.

Prerequisite: Permission of instructor.

37.539 Contemporary German Literature (3)

Course content changes each semester; emphasis on (a) Novel, or (b) Drama, or (c) Poetry. Course may be taken for credit more than once.

Prerequisite: Permission of instructor.

37.540 Russian Structure (3)

A contemporary and historical analysis of the phonology, morphology, and syntax of Russian.

Prerequisite: Permission of instructor.

37.541 History of the Russian Language (3)

Study of the Russian language through various stages of its development.

Prerequisite: Permission of instructor.

37.542 Russian Stylistics (3)

Word choice and word grouping. Figurative speech. Rhetorical figures. Grammatical elements of style. Style levels.

Prerequisite: Permission of instructor.

37.543 Russian Classics (3)

Course content changes each semester; emphasis on life and works of one major writer of the 19th century. Course may be taken for credit more than once.

Prerequisite: Permission of instructor.

37.544 Soviet Literature (3)

Course content changes each semester; emphasis on one major genre or period of Soviet literature. Course may be taken for credit more than once.

Prerequisite: Permission of instructor.

37.545 Russian Drama (3)

Course content changes each semester; emphasis on a major period or works of one outstanding Russian playwright. Course may be taken for credit more than once.

Prerequisite: Permission of instructor.

37.546 Russian Poetry (3)

Course content changes each semester; emphasis on a major period or works of one outstanding Russian poet. Course may be taken for credit more than once.

Prerequisite: Permission of instructor.

- 37.550 Spanish Structure (3)**
A contemporary and historical analysis of the phonology, morphology, and syntax of Spanish. The course is conducted in English.
Prerequisite: Permission of instructor.
- 37.551 History of the Spanish Language (3)**
Study of the Spanish language through various stages of its development in Europe and America.
Prerequisite: Permission of instructor.
- 37.552 Spanish Stylistics (3)**
Word choice and word grouping. Figurative speech. Rhetorical figures. Grammatical elements of style. Style levels.
Prerequisite: Permission of instructor.
- 37.553 Spanish Classics (3)**
Course content changes each semester; emphasis on a period of Spanish literature from the Medieval Epic to the generation of 1898. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.554 Classics of Latin American Literature (3)**
Course content changes each semester; emphasis on a period of Spanish American literature from the Colonial era to the present time. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.555 Spanish Literature After the Civil War (3)**
Course content changes each semester; emphasis on a major contemporary writer. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.556 Twentieth Century Latin American Novel (3)**
Course content changes each semester; emphasis on a major contemporary novelist. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.595 Linguistic Introduction to Sanskrit I (3)***
Primary stress on learning the linguistic structure of Sanskrit and on developing reading skill. A general introduction regarding the position of Sanskrit within the Indo-European family of languages. Historical development of Sanskrit.
Prerequisite: Permission of instructor.
- 37.596 Linguistic Introduction to Sanskrit II (3)***
Continuation of 37.595.
Prerequisite: 37.595 or equivalent.
- 37.600 Linguistic Structure III: Theories of Syntax (3)**
Schools of syntactic analysis. Introduction to Phrase Structure, Dependency Theory and Transformations (Chomsky-school). Comparison of these types of analysis with one another and with IC analysis and Transformations (Harris-school), as taught in Linguistic Structure II. Additional treatment of Transformations (Harris-school).
Prerequisite: Permission of instructor.
- 37.605 Semantics (3)**
History of semantic theory. Semantic changes, reflecting cultural change. Ambiguity of meaning. Metaphors. Synonymy. Etymologies. World-field theory. Structural semantics versus historical semantics.
Prerequisite: Permission of instructor.

* Available only through Consortium of Universities.

- 37.700 Visiting Scholar's Seminar (3)**
Seminar with flexible content pertaining to one or more selected topics in foreign literatures and linguistics. May be taken for credit more than once.
- 37.702 Seminar in French Literature (3)**
Reports and critical discussion of research papers on French literature. Different content Fall and Spring. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.703 Seminar in German Literature (3)**
Reports and critical discussion of research papers on German literature. Different content Fall and Spring. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.704 Seminar in Russian Literature (3)**
Reports and critical discussion of research papers on Russian Literature. Different content Fall and Spring. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.705 Seminar in Spanish and Latin-American Literature (3)**
Reports and critical discussion of research papers on Spanish and Latin-American literature. Different content Fall and Spring. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.710 Seminar in Linguistics (3)**
Reports and critical discussions on various theoretical and practical problems in the scientific study of language, methodology in linguistic research, and other pertinent linguistic subjects. Different content Fall and Spring. Course may be taken for credit more than once.
Prerequisite: Permission of instructor.
- 37.797 Master's Thesis Seminar (3-6)**
- 75.523 Colloquium on France (3)**
Lectures, reports and critical discussions on one or more selected topics pertaining to France's current role in international politics. The course is conducted in French. Course may be taken for credit more than once.
Prerequisite: Three years college French or equivalent.
- 75.543 Colloquium on Soviet Union (3)**
Lectures, reports and critical discussions on one or more of the following topics: Soviet political system; Russia and USSR: Continuity and change; Communist semantics as a propaganda means; cultural scene. The course is conducted in Russian. Course may be taken for credit more than once.
Prerequisite: Three years college Russian or equivalent.
- 75.553 Colloquium on Latin America (3)**
Lectures, reports and critical discussions on one or more of the following topics: peoples and governments of Latin America; cultural trends; political and economic problems; international relations. The course is conducted in Spanish. Course may be taken for credit more than once.
Prerequisite: Three years college Spanish or equivalent.

Mathematics and Statistics

Professors:

NATHANIEL MACON
GRACE SHOVER QUINN
(on leave 1968-69)
STEPHEN H. SCHOT, *Co-Chairman,*
Mathematics
JOHN H. SMITH, *Co-Chairman,*
Statistics

Associate Professors:

BASIL P. KORIN
EDMUND B. MC CUE
MARY W. GRAY

Assistant Professors:

DAVID CROSBY
DONALD H. FLANDERS
HOWARD WILSON

Instructors:

HELMER G. JUNGHANS
CLAIRE T. MACHLIN
ELIZABETH TAYLOR

Adjunct Professors:

HOWARD H. CAMPAIGNE
JEROME CORNFELD
PHILIP DESIND
WALTER W. JACOBS
ELGY S. JOHNSON
HARRY M. ROSENBLATT
ERNEST RUBIN
WALT R. SIMMONS
FEODOR THILHEIMER
SAUL CASS
JOHN WILLIAM WRENCH, JR.

Professorial Lecturers:

WILSON L. SCOTT
DANIEL SHANKS
RICHARD SORENSON

Lecturers:

EDWARD A. ANDERSON, JR.
MORRIS ABRAMS
EARL BRYANT
DONALD WINSTON FLAGG
IRVING GEDANKEN
ARTHUR JAFFE

UNDERGRADUATE DEGREE Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities	(12 hours)
	Science and Mathematics are	
	normally satisfied by major and related	
	requirements. Consult department.	(12 hours)
	Social Science	(12 hours)

Language Requirement Through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Required language: French, German or Russian.

MAJOR IN MATHEMATICS

MAJOR COURSES (38 hours)

41.111, 41.222, 41.223, 41.310, 41.312, 41.322, six hours selected from 41.321, 41.440, 41.474, 69.484, one year selected from 41.502-503, 41.512-41.513, 41.520-521, 41.550-551, 69.500-501; and six

more hours selected from any of the aforementioned 500 level courses or from 41.510, 41.515, 41.518, 41.519, 41.523, 41.524, 41.528, 41.546, 41.570, 41.574, 41.575.

RELATED COURSES (10 hours)

Ten hours selected from the following to include at least one two-courses sequence with laboratory:

9.110-9.111 General Biology I, II (4, 4)

15.110-15.111 General Chemistry I, II (4, 4)

15.200-15.210, 15.211 Chemical Principles, Qualitative Inorganic Analysis, Laboratory (4, 3, 1)

27.101-102 Principles of Earth Sciences I, II (4, 4)

51.220-221, 51.222-51.223 Fundamentals of Physics I, II, Laboratory I, II (4, 4, 1, 1).

TOOL COURSES

None

Electives To complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

Master of Arts in Mathematics

Course Requirements Minimum of 30 hours of approved graduate work, including 41.797 Master's Thesis Seminar in Mathematics and Statistics (3-6).

Written Comprehensive Examinations Three, including 41.001 Modern Algebra or 41.002 Matrix Theory; 41.003 Real Variables or 41.004 Complex Variables; and one other approved field.

Other Requirements Proficiency examination in French, German or Russian. Thesis and oral defense of thesis and the field in which it lies.

Master of Arts in Statistics

Course Requirements Minimum of 30 semester hours of approved graduate work, including 41.797 Masters Thesis Seminar in Mathematics and Statistics.

Written Comprehensive Examinations Three, including 69.001 Statistical Theory; 41.024 Theory of Probability; and one other approved field in statistics, mathematics (especially 41.027 Linear Algebra for Statistics or 69.026 Analysis for Statistics) or a field of application.

Other Requirements Proficiency examination in Russian, German, or French. Thesis and oral defense of thesis and the field in which it lies.

Doctor of Philosophy in Mathematics

Course Requirements Minimum of 66 hours of approved graduate work is required, plus the required semester hours in 41.799 Doctoral Seminar in Mathematics and Statistics, at least 30 (plus dissertation credit) of which must be completed in residence at The American University.

Written Comprehensive Examinations Five approved fields are required: 41.006 Modern Algebra and Matrix Theory; 41.005 Real and Complex Variables; and three other approved fields, at least two of which must be in mathematics or mathematical statistics and one of which may be in a field closely related to the field of major interest.

MATHEMATICS

Graduate Comprehensive CORE FIELDS

Examination Fields 41.001 Modern Algebra (M.A. only)
 41.002 Matrix Theory (M.A. only)
 41.003 Real Variables (M.A. only)
 41.004 Complex Variables (M.A. only)
 41.005 Real and Complex Variables (Ph.D. only)
 41.006 Modern Algebra and Matrix Theory (Ph.D. only)

SPECIALIZED FIELDS

41.010 Mathematical Foundations
 41.011 Number Theory
 41.012 Partial Differential Equations
 41.013 Integral Equations
 41.014 Calculus of Variations
 41.018 Numerical Analysis
 41.023 Stochastic Processes
 41.024 Theory of Probability
 41.025 Linear and Dynamic Programming

Other Requirements Proficiency is required in two languages chosen from French, German or Russian to be satisfied before advancement to candidacy. The dissertation on a topic sponsored by a full-time faculty member is in an appropriate field of analysis or algebra and oral defense of dissertation in the field in which it lies is required.

Doctor of Philosophy in Statistics

Course Requirements A minimum of 66 semester hours of approved graduate work is required plus the required semester hours in 41.799 Doctoral Seminar in Mathematics and Statistics, at least 30 (plus dissertation credit) of which must be completed in residence at The American University.

Written Comprehensive Examinations Five fields are required as follows:
 69.002 and 69.003 Advanced Statistical Theory I and II
 41.024 Theory of Probability
 69.026 Analysis for Statistics
 69.027 Linear Algebra for Statistics

Other Requirements Proficiency is required in two languages chosen from Russian, German, and French to be satisfied before advancement to candidacy. The dissertation on a topic sponsored by a full-time faculty member is in an appropriate field of mathematical statistics and the oral defense of the dissertation and the field in which it lies follows.

STATISTICS

e Comprehensive CORE FIELDS

- Examination Fields
- 69.001 Statistical Theory (M.A. only)
 - 69.002 and 69.003 Advanced Statistical Theory I and II (Ph.D. only)
 - 41.024 Theory of Probability (M.A. and Ph.D.)
 - 69.026 Analysis for Statistics (required for Ph.D.)
 - 69.027 Linear Algebra for Statistics (required for Ph.D.)

SPECIALIZED FIELDS

- 41.023 Stochastic Processes
- 69.010 Theory of Experiment Design
- 69.020 Theory of Sampling

UNDERGRADUATE COURSES

Mathematics

41.100 Survey of Mathematics I (3)

Sets and logic; counting; powers and sequences; probability; linear equations.

Prerequisite: Two years of high school mathematics.

41.101 Survey of Mathematics II (3)

Systems of linear equations and matrices; linear transformations; linear programming; properties of functions.

Prerequisite: 41.100.

45.105-106 The Nature of Mathematics I, II (3, 3)

The interplay of mathematics with the natural, social, and physical sciences and the humanities.

Prerequisite: Permission of the department.

41.110 Fundamentals of Mathematics (3)

Mathematical logic; number of systems; polynomials; algebraic fractions; exponents and radicals; sets; equations; inequalities; matrices and determinants; functions and relations; algebraic functions. Primarily for science majors and those intending to take Calculus.

Prerequisite: Three years high school mathematics or 41.100. No credit for both 41.101 and 41.110.

41.111 Analytic Geometry and Introduction to Calculus (3)

Trigonometric and inverse trigonometric functions; straight line equations; limit processes; differentiation of polynomials.

Prerequisite: 41.110 or four years of high school mathematics.

41.222 Differential and Integral Calculus I (4)

Differentiation of algebraic and transcendental functions with applications; antidifferentiation; fundamental theorem; theorem of mean value.

Prerequisite: 41.111 or five years of high school mathematics including analytic geometry and some calculus.

41.223 Differential and Integral Calculus II (4)

Techniques of integration; conic sections; polar coordinates and parametric equations; improper integrals; indeterminate forms; vector functions in two and three dimensions; partial differentiation; multiple integration; infinite series.

Prerequisite: 41.222.

41.310 Linear Algebra (3)

Vector spaces, systems of linear equations, solutions by matrices, determinants, linear transformations, algebraic forms.

Prerequisite: 41.222 and permission of instructor, or 41.223.

41.312 Abstract Algebra (3)

Sets; groups, rings, integral domains; fields; polynomial rings.

Prerequisite: 41.223 or 41.222 and permission.

41.321 Differential Equations (3)

First-order first-degree equations, linear equations of n 'th order with constant coefficients, Laplace transforms, applications to mechanics and electrical circuits, special equations of higher order, solution in series.

Prerequisite: 41.223.

41.322 Intermediate Calculus (3)

Functions of several variables. Mappings and Jacobians. Implicit function and inversion theorems. Lagrange multipliers. Quadratic forms. Gamma function. Line integrals. Green's, Gauss', and Stokes' theorems.

Prerequisite: 44.223.

41.440 Modern Geometry (3)

Applications of linear algebra to analytic geometry; linear mappings, Euclidean and unitary vector spaces; geometry of quadric surfaces; reduction of quadratic forms.

Prerequisite: 41.310.

41.474 Probability (3)

Algebra of sets; probability in discrete sample spaces; combinatorial analysis; random variables; binomial, Poisson, normal and other distributions; applications.

Prerequisite: 41.223.

41.480 History of Mathematics (1)

Individual topics in the history of mathematics since Newton and Leibniz.

Prerequisite: Permission of the instructor.

Statistics

69.202 Basic Statistics (3)

Classification of data, averages, dispersion, probability, frequency distributions, confidence intervals, tests of significance, simple regression and correlation.

Prerequisite: 41.100.

69.300 Business Statistics (3)

Estimation, inference, multiple regression and correlation, index numbers, secular trend, seasonal and cyclical variations.

Prerequisite: 69.202.

69.301 Psychological Statistics (3)

Estimation, inference, special methods of two-variable correlation, multiple regression and correlation, design of samples and experiments, contingency tables.

Prerequisite: 69.202.

69.400 Managerial Statistics (3)

Survey of first-year statistics (see 69.202 and 69.300); required for MBA candidates entering without 6 hours of statistics.

Prerequisite: 41.100 or graduate status.

69.484 Introduction to Mathematical Statistics (3)

Probability distributions, introduction to sampling, sampling distributions,

and the theory of point estimation and statistical inference including tests of hypotheses and confidence intervals.

Prerequisite: 41.474 or 69.202 and 41.322.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses are open only to graduate students.)

Mathematics

FOUNDATIONS AND ALGEBRA

41.502 Foundations of Mathematics I (3)

Modern developments in mathematics including elementary symbolic logic, truth tables, axiomatics, foundations of geometry, introduction to set theory, transfinite numbers.

Prerequisites: 41.322 and further work or teaching experience in mathematics.

41.503 Foundations of Mathematics II (3)

Continuation of 41.502. Peano's axioms, Dedekind cuts, the real and complex number systems, functions, homeomorphism and topological concepts, groups, rings, fields and other algebraic systems.

Prerequisite: 41.502 or equivalent.

41.510 Matrix Theory (3)

Vector spaces, linear transformations, similarity, rational and classical canonical forms, unitary spaces, unitary equivalence, quadratic forms, congruence, rings of matrices, matrix representations of groups and algebras.

Prerequisite: 41.310.

41.512 Modern Algebra I (3)

Formulation of induction; equivalent relations and partitions; properties of groups through the Sylow theorems, classification of groups of low order; properties of rings and ideals, factorization theory. Eisenstein's criterion. Zorn's lemma, Krull's theorem; modules.

Prerequisite: 41.312.

41.513 Modern Algebra II (3)

Solvable groups; basic theorem for finitely generated Abelian groups; structure of fields and extensions; Wedderburn's theorem, Galois theory; Wedderburn-Artin structure-theory, Frobenius theorem, group representations.

Prerequisite: 41.512.

41.515 Number Theory (3)

Divisibility; sequences of primes, fundamental theorem of arithmetic, congruences; totient; Euler's theorem; Wilson's theorem; congruences, diophantine equations; primitive roots; quadratic residues; Jacobi symbol; quadratic reciprocity; number-theoretic functions; Mobius inversion formula, multiplicative functions; sums of squares; partitions.

Prerequisite: 41.223.

41.518 Linear Programming (3)

Theoretical, computational, and applied aspects of linear programming. Simplex, revised simplex, transportation algorithms; duality; parametric programming; theory of games and management problems applications.

Prerequisite: 41.310.

- 41.519 Advanced Topics in Mathematical Programming (3)**
Revised simplex method, parametric programming, solution of large-scale systems, decomposition algorithm, network analysis, integer programming, non-linear programming, stochastic programming, dynamic programming.
Prerequisites: 41.518 and 41.320.
- 41.576 Mathematical Methods of Operations Research (3)**
Short review of probability theory. Laplace and Z-transforms as used in probability theory. Stochastic processes and their use in industrial problems. Queueing theory, birth-death processes, other models where interarrival or service-time distributions are non-exponential, Inventory theory; linear and dynamic programming under uncertainty.
Prerequisites: 41.310 and 41.474.
- 41.610 Advanced Linear Algebra (3)**
Function of matrices, matrix equations, special classes of matrices, sets of linear transformations, products of vector spaces, introduction to multilinear algebra, symplectic and orthogonal spaces, linear groups, associative and non-associative linear algebras, projective geometry, infinite-dimensional vector space.
Prerequisite: 41.512.
- 41.616 Theory of Groups (3)**
Homomorphism and isomorphism theorems and applications; p groups; direct products, Ramakrull-Schmidt theorems; chains and refinement theorems; Schreier, Jordan-Holder theorems; solvables, supersolvable, nilpotent groups; P. Hall's theorems; Burnside's theorem; group extensions: Abelian groups; applications.
Prerequisite: 41.512.
- 41.710 Selected Topics in Algebra (3)**
Topics selected from: field theory; theory of rings and algebras; algebraic number theory; theory of quadratic forms; lattice theory; homological algebra; representations of groups and algebras; Lie algebra and groups, non-associative algebras, topological algebra.
Prerequisite: 41.512.

ANALYSIS, GEOMETRY, AND TOPOLOGY

- 41.520-521 Introduction to Analysis I, II (3, 3)**
The number systems, topology of Euclidean and metric spaces, continuous and differentiable functions, the Riemann-Stieltjes integral, sequences of functions, differentiability in several variables, normed vector spaces.
Prerequisite: 41.322, 41.520.
- 41.523 Ordinary Differential Equations (3)**
Existence theorems, Riccati equation. Solutions in power series, regular and irregular singular points, two-point boundary-value problems, Sturm-Liouville theory, orthogonal functions.
Prerequisite: 41.321.
- 41.524 Partial Differential Equations (3)**
First and second order linear equations, type, characteristics, reduction to normal forms, separation of variables, Poisson's formula, Green's function.
Prerequisite: 41.523.
- 41.525 Special Functions (3)**
Fundamental properties of Gamma and Bessel functions, Legendre, Hermite, Laguerre, and Chebyshev polynomials; hypergeometric functions; asymptotic expansion; determination of zeros.
Prerequisite: 41.521.

41.528 Vector and Tensor Analysis (3)

Algebra and calculus of vectors, theorems of Green, Gauss, and Stokes. Riemannian geometry; contra variant, covariant, and mixed tensors, Christoffel symbols, Gaussian curvature. Applications.

Prerequisite: 41.321.

41.546 Point-Set Topology (3)

Topological spaces, open and closed sets, compactness, connectivity, metric --- , Hausdorff --- , and linear normed-spaces, topological transformations, separation theorems.

Prerequisite: 41.520.

41.570 Complex Variables for Applications (3)

Selected topics in complex variables; integrals of analytic functions; uniform convergence; power series; singularities; residues and contour integration. Not open to graduate students in mathematics. Fall.

Prerequisites: 41.322.

41.571 Analysis for Statistics (3)

Point sets; measurable sets and functions; Lebesgue integrals; differentiation and integration; interchange of order: Lebesgue-Stieltjes integrals; dominated convergence. Spring. Not open to graduate students in mathematics.

Prerequisite: 41.322.

41.620 Complex Variables I (3)

Topological concepts, differentiation and integration of complex-valued functions, analyticity, Cauchy's theorem, Laurent series, singularities, contour integration and residue calculus.

Prerequisite: 41.521.

41.621 Complex Variables II (3)

Analytic continuation, entire functions, conformal mapping, Riemann surfaces, periodic and elliptic functions, Riemann mapping theorem.

Prerequisite: 41.620.

41.622-41.623 Real Variables I and II (3, 3)

Theory of measure and integration. Measurable sets; Lebesgue measure; measure spaces; measurable functions; integration; convergence theorems; L_p spaces, Daniell integration; topics selected from introductory probability, Hilbert space, Banach space.

Prerequisite: 41.521.

41.625 Calculus of Variations (3)

Extremization of functionals. Euler, Legendre, Weierstrass, and Jacobi necessary conditions. Sufficient conditions for weak and strong extrema. Extremal fields and Hilbert's invariant integral. Isoperimetric problems and inequalities. Direct methods.

Prerequisite: 41.521.

41.626 Integral Equations (3)

Fredholm equations and theorems, Neumann series, resolvent, degenerate kernels. Hilbert-Schmidt theory, symmetric kernels, eigenfunction expansions, properties and estimation of eigenvalues. Application to boundary value problems. Singular integral equations.

Prerequisite: 41.521.

41.634 Functional Analysis (3)

Topological vector spaces, Banach spaces, linear functional and dual space, W^* -topology, uniform boundedness and closed graph theorems, completely continuous operators, Hilbert space, spectral theorem, unbounded operators.

Prerequisites: 41.310 and 41.623.

41.560 Numerical Analysis I: Basic Problems (3)

Interpolation, finite differences, numerical differentiation, integration, and approximation by orthogonal functions, least squares, asymptotic representations, difference equations, continued fractions, planning tables, optimum interval tables, differencing.

Prerequisite: 41.223.

41.561 Numerical Analysis II: Matrices (3)

Calculation of inverses of matrices by various methods, iterative processes for solving systems of simultaneous linear equations, and determination of eigenvalues and eigenvectors of matrices.

Prerequisite: 41.510.

41.562 Numerical Analysis III: Ordinary Differential Equations (3)

Numerical solution of ordinary differential equations of initial value and boundary value types. Picard's method, Runge-Kutta and other methods. Error analysis, stability, rates of convergence. Rayleigh-Ritz method.

Prerequisites: 41.560 and 41.321.

41.563 Numerical Analysis IV: Partial Differential Equations (3)

Finite difference methods for elliptic and parabolic equations. Matrix iterative analysis, overrelaxation. Approximation of operators and monotony theorems. Error analysis, stability, and rates of convergence. Characteristic methods for hyperbolic equations.

Prerequisite: 41.560.

MATHEMATICAL PHYSICS

41.550 Mathematics for Physics I (3)

Fourier series, integrals, and transforms, Laplace transform methods, eigenvalues and diagonalization of matrices, oscillatory systems and normal modes, calculus of variations, special functions.

Prerequisite: 41.321.

41.551 Mathematics for Physics II (3)

Wave equation, vibrating strings and membranes, Laplace's equation, heat equation, complex variables and contour integration, conformal mapping, tensors.

Prerequisite: 41.550.

41.654 Partial Differential Equations of Mathematical Physics I (3)

Second order hyperbolic equations, characteristics, Cauchy and Goursat problems, Riemann's method, quasi-linear equations, Legendre transformation, wave equation in n -dimensions, spherical means, Hadamard's method.

Prerequisites: 41.524 and 41.551.

41.655 Partial Differential Equations of Mathematical Physics II (3)

Second order elliptic, parabolic, and mixed equations, problems of Dirichlet and Neumann, Green's function, potentials of volume and surface distributions, diffusion phenomena, Tricomi's equation.

Prerequisite: 41.654.

41.656 Mathematical Theory of Fluid Dynamics I (3)

Basic kinematic and dynamics concepts, incompressible fluids, vorticity and circulation theorems, potential and stream function, plane and axially symmetric flows, conformal mapping, aerofoils, vortex lines and streets, jets and free streamline problems.

Prerequisite: 41.551.

41.657 Mathematical Theory of Fluid Dynamics II (3)

Dynamics and thermodynamics of compressible fluids, subsonic, transonic,

and supersonic flows, Prandtl-Busemann method, hodograph method, shock waves, viscous fluids, boundary layer theory, and turbulence.

Prerequisite: 41.656.

SEMINARS

41.720 Seminar: Analysis (3)

Research in analysis, involving individual projects.

Prerequisite: 41.621 or 41.623.

41.750 Seminar: Applied Mathematics (3)

Research in applied mathematics, involving individual projects.

Prerequisite: 41.551.

69.790 Seminar in Statistical Theory and Probability (3)

Advanced topics will be considered according to the needs of the students.

Prerequisites: 69.610-611 and another 600-level sequence.

41.797 Master's Thesis Seminar in Mathematics and Statistics (3-6)

41.799 Doctoral Dissertation Seminar in Mathematics and Statistics (3-6)

Statistics

THEORY OF PROBABILITY AND STATISTICS

41.574-575 Theory of Probability I and II (3, 3)

Foundations of the theory of probability; random variables; distribution functions; generating and characteristic functions; special distributions and statistics; limit theorems; Markov chains; introduction to stochastic processes. Fall, Spring.

Prerequisite: 41.474 *corequisite* 41.570.

69.500-69.501 Mathematical Statistics I and II (3, 3)

Probability concepts; discrete and continuous distributions; expected values and moments; sampling, point estimators, desirable properties; maximum likelihood; linear estimation, regression, and variance analysis; interval estimation and significance tests. Fall, Spring.

Prerequisites: 41.322 and 41.474, *corequisite* 41.310.

69.510-69.511 Theory of Sampling I and II (3, 3)

Mathematical development of basic principles of survey design including methods for determining expected value, bias, variance and mean square error; simple random, systematic, stratified, cluster, multi-stage, and double sampling; unbiased, ratio, regression, and composite estimation; optimum allocation of resources; controlled and other non-simple methods of selection; introduction to measurement error; comparison of alternative designs.

Prerequisites: 41.223, *corequisite* 69.500.

69.600-601 Advanced Mathematical Statistics I and II (3, 3)

General theory of random variables and probability distributions; advanced topics in theory of sampling and statistical inference. Fall, Spring.

Prerequisites: 69.501 and 41.571.

69.604-605 Statistical Decision Theory I and II (3, 3)

Convex sets and functions; minimax theorem; statistical games; utility and principles of choice; strategies; complete classes; Bayes procedures; principles of invariance; sequential procedures; related topics. 1967-68 and every third year.

Prerequisite: 41.571, *corequisite* 69.610.

69.610-611 Statistical Inference I and II (3, 3)

Point estimation; consistency, unbiasedness, efficiency, sufficiency, minimal sufficiency, minimum variance, maximum likelihood, least squares. Confidence, fiducial, Bayesian, and tolerance intervals. Simple and composite hypotheses; power of tests; completeness; similar regions; likelihood ratio tests. Robustness, distribution-free and sequential procedures. Fall, Spring.

Prerequisite: 69.501, *corequisite* 41.574.

69.620-621 Multivariate Analysis I and II (3, 3)

Multivariate normal distribution Hotelling's T; Wilks' likelihood ratio criterion; other test statistics; classification problems; principal components; canonical correlation; general multivariate regression and experimental designs; related topics. 1970-71 and alternate years.

Prerequisites: 41.510, 41.575, and 69.501.

69.670-671 Linear Estimation I and II (3, 3)

General linear hypothesis; least squares estimation: Gauss-Markov theorem; regression; analysis of variance; multiple comparisons; analysis of covariance; factorial designs; randomized blocks; other experimental designs; effects of departures from assumptions. 1969-70 and alternate years.

Prerequisites: 69.501, 41.310, and additional work in matrix algebra.

69.678-679 Stochastic Processes I and II (3, 3)

Distributions; generating functions; random walks; Markov chains; branching processes; Poisson processes; queueing theory; birth and death processes; normal processes; covariance processes; related topics. 1968-69 and every third year.

Prerequisites: 41.570, 41.575, and 69.501.

69.680-681 Advanced Mathematical Statistics I and II (3, 3)

General theory of random variables and probability distributions; advanced topics in theory of sampling and statistical inference. 1966-67 and alternate years.

Prerequisites: 41.571, 41.575, and 69.610.

STATISTICAL METHODOLOGY COURSES

69.514 Methodology I: General (3)

Averages, dispersion, probability, sampling, approach to normality; simple and multiple regression; tests and confidence intervals for means, proportions, differences, regression coefficients; nonparametric statistics; analysis of variance.

Prerequisite: 69.202.

69.515 Methodology II: Regression (3)

Simple and multiple regression; least squares; curve fitting; graphic techniques; tests and confidence intervals for regression coefficients.

Prerequisite: 69.514.

69.516 Methodology III: Design of Experiments (3)

Designing and analyzing results of balanced experiments; simple analysis of variance; components of variance; analysis of covariance; related topics.

Prerequisite: 69.514.

69.517 Methodology IV: Sampling (3)

Sampling principles; stratification; alternative methods of selection and estimation; comparisons of accuracy, precision, and cost. Applications: auditing, acceptance inspection, market research, personnel administration.

Prerequisite: 69.514.

69.518 Methodology V: Psychological Statistics (3)

Methods appropriate for analyzing data of psychological research; validity and reliability; regression; analysis of variance and covariance; interval estimates and significance tests; related topics.

Prerequisite: 69.514 or 69.301.

Music

Professors:

JAMES L. MCLAIN
GORDON H. SMITH
LLOYD ULTAN (*Chairman*)
(on leave, Spring 1969)

Associate Professors:

EVELYN SWARTHOUT HAYES

Assistant Professors:

ESTHER W. BALLOU
CHARLES F. CROWDER
THOMAS H. HILL
VITO E. MASON
GEORGE C. SCHUETZE, JR.
(*Acting Chairman, Spring 1969*)
ALAN R. MANDEL

Instructor:

ELIZABETH A. VRENIOS

Adjunct Professors:

CHARLES L. BYRD
WERNER LYWEN
MARK THOMAS

Professorial Lecturers:

SINA BERLINSKI
NEVA GREENWOOD
JOHN E. MARLOW
PRESTON ROCKHOLT

Lecturers:

WILLIS BENNETT
CHARLES BRADY
STEVEN BREWSTER

JEANNE CHALIFOUX
SIDNEY FORREST
EDNA MAE GEORGE
VIRGINIA HARPHAM
ERVIN KLINKON
NANCY MATHENY
SYLVIA MEYER
JOHN MOREHEN
RICHARD PARNAS
KENNETH PASMANICK
ARMAND SARRO
GEOFFREY SIMON
DOROTHY STAHL
JOHN WUNDERLICH
ROBERT E. ZIPP

UNDERGRADUATE DEGREE Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities are normally satisfied by major and related requirements.	
	Consult department.	(12 hours)
	Science and Mathematics	(12 hours)
	Social Science	(12 hours)

Language Requirement	One language is required through the intermediate level. The number of hours required varies according to the students prior preparation in language and the courses selected at the University. Consult Department for recommended languages.
----------------------	--

Departmental Requirements	MAJOR COURSES (58 hours)	
	Including 43.104 Theory I (4)	43.305 Theory VI (4)
	43.105 Theory II (4)	43.306 Conducting I (2)
	43.204 Theory III (4)	43.307 Conducting II (2)
	43.205 Theory IV (4)	43.311 Orchestration (2)
	43.300 History of Music I (3)	43.312 Keyboard Harmony I (2)

43.301 History of Music II (3) 43.313 Keyboard Harmony II (2)
43.304 Theory V (4) and 10 hours of Applied Music.

RELATED COURSES

All music majors must choose as a part of their major a related specialization from the following: music history and literature; music theory and composition; music education (vocal or instrumental); or performance. A minimum of eight hours of advanced work in the chosen specialized area must be completed.

OTHER REQUIREMENTS

Students in every specialization will be expected to demonstrate a minimal proficiency at the keyboard and pass a Departmental Senior Comprehensive Exam. Performance majors will be expected to present a full senior recital. All other music majors must present one half of a senior recital program.

All students majoring in music are required to participate in a faculty-conducted ensemble related to their performance area, where possible, for a minimum of six semesters.

Electives To complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREE

(Graduate requirements are in the process of being revised to meet the new graduate regulations approved by the University Senate in May 1967. Students should consult departmental offices for the latest information.)

Master of Arts

Fields of Specialization Composition; Music History (Musicology); Performance; Music Education (Instrumental, Vocal, or General Music sub-specialties).

Master of Arts in Church Music

Fields of Specialization ORGAN OR VOICE SUB-SPECIALTIES

The Master's Program in Church Music is offered with the cooperation of the College of Church Musicians of the Washington Cathedral. It is a 36 credit hour program which includes courses offered at the Cathedral and in this Department and does not require a thesis.

Admission See page 36.

For possible graduate deficiencies, consult undergraduate departmental requirements. Four semesters of Harmony and of Ear Training, and one semester each of 16th-century Counterpoint, 18th-century Counterpoint, and Form and Analysis shall be considered the equivalent of Theory I-VI. Graduate deficiencies may be made up by appropriate course work or by waiver examination; courses no longer offered by the Department (e.g., 16th-century Counterpoint) may be taken as undergraduate reading courses.

Students wishing to specialize in Performance are required to audition,

either in person or *via* tape recording, prior to admission to graduate study. The graduate degree is offered in all undergraduate performance areas, with the exception of guitar.

Students wishing to specialize in Music Education are required to have completed before admission to graduate study:

- (1) nine hours in education;
- (2) one semester of teaching experience, or the equivalent in practice teaching (see listing in the Department of Education—21.792)

All students are required to take the departmental Senior Comprehensive Examination in music history and theory either before or during their first semester of graduate work. The results are intended for counseling purposes only.

Course Requirements Minimum of 30 hours (36 in Church Music) of approved graduate work, including the requirements in one of the following fields of specialization:

COMPOSITION: 43.507; 43.703, 43.797; plus a minimum of nine (9) additional hours in theory and composition courses.

MUSIC HISTORY AND LITERATURE (MUSICOLOGY): 43.510; 43.797 (3-6 hours); plus a minimum of 12 additional hours in Music History (Musicology) courses.

PERFORMANCE: 43.510; 43.550; 43.551; 44.791 and/or 44.792 (totaling 4 hours); 43.797 (3 hours).

CHURCH MUSIC: 43.515; 43.570; 43.670 (6 hours); 43.680; 43.701; 43.791 (2 hours; voice lessons for organ students or vice versa); 43.792 (4 hours); plus either of the following (offered at the College of Church Musicians):

Organ sub-specialty: Service Playing and Improvisation I & II (4 hours); Organ Repertory I & II (2 hours).

Vocal sub-specialty: Choir Training and Administration I & II (2 hours); Choral Repertory I & II (2 hours).

Elective courses (to total 36 hours) may include any other graduate-level courses in the Department of Music; appropriate courses in philosophy and religion from the offerings of the Department of Philosophy and Religion, or from those of the Wesley Theological Seminary (to be selected with the assistance of the Church Music Adviser); the following courses from the offerings of the College of Church Musicians:

Liturgies I, II, III, IV (4-6 hours)

Supervised Service Direction I, II, III, IV (2 hours)

Service Playing III & IV (4-6 hours)

Choir Training and Administration I & II (2 hours)

Choral Repertory I & II (2 hours)

Organ Repertory I & II (2 hours)

Conducting III & IV (with special permission; 2 hours)

MUSIC EDUCATION (*instrumental and vocal*): 21.504 (see Department of Education listing in the University Bulletin); 43.540; 43.760; plus either 43.797 (3-6 hours) or 43.690 (3-6 hours).

MUSIC EDUCATION (*general music*): 43.510; 43.760; either 43.797 (3-6 hours) or 43.690 (3-6 hours); plus nine (9) additional hours in Music History (Musicology) courses and six (6) hours in Theory and Composition courses.

Electives to complete the 30 hours (36 hours in Church Music) may *not* include (also, see restrictions pertaining to Reading Courses):

(1) more than 6 hours of non-music courses; registration in such courses for credit for the degree must be approved by the chairman of the Department of Music;

(2) more than four (4) hours of applied music (students specializing in performance or in church music may apply no more than 2 hours of applied music, in addition to that already required, toward the degree);

(3) more than 3 hours of 43.555.

Comprehensive Examinations One examination that combines and interrelates music history and theory; and one examination in the student's field of specialization.

Graduate Comprehensive Examination Fields 43.000 General Music History and Theory (required of all students)
43.001 Composition
43.002 Music History (Musicology)
43.003 Church Music (organ)
43.004 Church Music (voice)
43.005 Music Education (instrumental)
43.006 Music Education (vocal)
43.007 Music Education (general music)
43.008 Masters Recital

Other Requirements Proficiency in German, French, or an approved substitute is required. Statistics, or the equivalent, is required in place of a language proficiency of students specializing in instrumental or vocal Music Education. Students specializing in Performance are required to present a minimum of four appearances on departmental student recitals, at least one as part of an ensemble performance.

UNDERGRADUATE COURSES

HISTORY AND LITERATURE

43.100 Fundamentals of Music (3)

Development of listening techniques based on an understanding of the functional role of the elements in the organization of music.

43.101 Survey of Musical Styles (3)

Representative compositions and composers from the Middle Ages to the Twentieth Century, compared and evaluated within an historical and cultural context.

Prerequisite: 43.100.

43.102 Orchestral Music (3)

The development of the orchestra and its music from the late Sixteenth Century to the present including consideration of form, style and instrumental color.

Prerequisite: 43.100.

43.103 The Evolution of Jazz (3)

A study of the cultural sources and the growth of divergent stylistic characteristics of Jazz through the past one hundred years.

Prerequisite: 43.100.

43.300 History of Music I (3)

Development of music in Western civilization from the modal structures of the Greeks to the Baroque Era.

Prerequisite: 43.205.

43.301 History of Music II (3)

Development of music in Western civilization from the Baroque Era to the present day.

Prerequisite: 43.300.

THEORY

43.104 Theory I (4)

Comprehensive study of scales, modes, rhythm, instruments, and notational practices from the Middle Ages to the present. Basic general concepts of rhythm, melody, harmony, counterpoint, and form studied in the context of developing ear and sight reading proficiency.

43.105 Theory II (4)

Line, rhythm, notation, form and vertical relationships as practiced in Medieval Music. Literature and style studied by analysis, composition, sight reading and aural dictation.

Prerequisite: 43.104.

43.204 Theory III (4)

Study of 15th and 16th Century style and theory by analysis, composition, sight reading and aural dictation.

Prerequisite: 43.105.

43.205 Theory IV (4)

Study of Baroque style and theory by analysis, composition, sight reading and aural dictation.

Prerequisite: 43.204.

43.304 Theory V (4)

Music of the Classic and Romantic Periods studied by analysis, composition, sight reading and aural dictation.

Prerequisite: 43.205.

43.305 Theory VI (4)

Study of the diverse styles and theoretical attitudes of the Twentieth Century by analysis, composition, sight reading and aural dictation.

Prerequisite: 43.304.

43.306 Conducting I (2)

Practical study of basic conducting technique; emphasis on choral conducting.

Prerequisite: 43.205.

43.307 Conducting II (2)

Orchestral conducting; score reading and interpretation.

Prerequisite: 43.306.

43.311 Orchestration (2)

Scoring for various chamber ensembles and full orchestra. Analysis of orchestration practice of master composers from classic era to present.

Prerequisite: 43.205.

43.312 Keyboard Harmony I (2)

Keyboard practice of chord progressions in four parts; cadence patterns;

simple melodic harmonization; harmonic sequences.

Prerequisite: 43.205.

43.313 Keyboard Harmony II (2)

Continuation of 43.312; modulation and transposition; special projects for individual needs.

Prerequisite: 43.312.

43.315 Composition I (3)

Individually supervised practice in writing short compositions in specified small forms.

Prerequisite: 43.205.

43.316 Composition II (3)

Continuation of 43.315; assignments adapted to individual needs and talents of students.

Prerequisite: 43.315.

MUSIC EDUCATION

43.140 Introduction to Music Education (3)

History of music education, contemporary philosophy and objectives of music education in the elementary and secondary schools; scope and sequence of the music curriculum appropriate to general, choral and instrumental instruction.

Prerequisite: Sophomore standing.

43.353 Music for Elementary School Teachers (3)

Technical background and methods of presentation for teaching music as a part of regular classroom instruction.

Prerequisite: 43.100.

43.360 Instrumental Music: Methods and Materials (3)

Survey of materials for building repertoire appropriate to various instrumental groupings; principles of pedagogy relating to the percussion family; methods and materials.

Prerequisite: 43.140.

43.361 Vocal Music in the Elementary School: Methods and Materials (3)

Principles, procedures and materials for the general music program in the elementary school.

Prerequisite: 43.140.

43.362 Vocal Music in the Secondary School: Methods and Materials (3)

Principles, procedures and materials for the general and choral music program in secondary schools.

Prerequisite: 43.140.

APPLIED MUSIC

43.113 Classic Guitar I (1)

Beginning study of classic guitar in preparation for private study.

43.114 Classic Guitar II (1)

Continuation of Classic Guitar I.

Prerequisite: 43.113 or audition.

43.115 Class Piano I (1)

Beginning piano study directed toward satisfaction of the Department's minimal piano requirements.

43.116 Class Piano II (1)

Continuation of basic piano skills begun in Class Piano I, necessary for entrance into 43.312 Keyboard Harmony, and private piano study.

Prerequisite: 43.115.

- 43.117 Class Voice I (1)**
Beginning voice study directed toward satisfaction of the minimal voice requirements in Music Education.
- 43.118 Class Voice II (1)**
Application of basic principles of correct use of the singing voice to the study of good song literature.
Prerequisite: 43.117.
- 43.149 Class Instrumental Study: Brass (1)**
Performance on brass instruments embodying fundamentals of embouchure formation, fingering, breathing and principles of pedagogy relating to the brass instruments, methods and materials.
Prerequisite: Permission of the instructor.
- 43.150 Class Instrumental Study: Strings (1)**
Performance on stringed instruments embodying fundamentals of position, fingering and bowings; principles of pedagogy relating to the string family; methods and materials.
Prerequisite: Permission of the instructor.
- 43.151 Class Instrumental Study: Woodwinds (1)**
Performance on woodwind instruments embodying fundamentals of embouchure formation, fingering, breathing; principles of pedagogy relating to the family; methods and materials.
Prerequisite: Permission of the instructor.
- 43.152 University Chorale (2 credit hours per year)**
Prepares and presents major works of choral literature.
Prerequisite: Audition.
- 43.153 University Singers (3 credit hours per year)**
A small, highly select traveling choral ensemble which presents both sacred and secular programs.
Prerequisite: Audition.
- 43.154 University Orchestra (1)**
Prerequisite: Audition.
- 43.155 Instrumental Ensemble (1)**
Symphonic wind ensemble, chamber ensemble, brass ensemble and string quartet.
Prerequisite: Audition.

APPLIED MUSIC (PRIVATE STUDY)

(All undergraduate courses in Applied Music may be repeated for credit. All fees listed are in addition to tuition.)

- 44.121 Private Instrumental or Vocal Study (1)**
Limited to students not majoring in music or music majors on secondary instruments.
Prerequisite: For piano students: 43.116 or equivalent background. Fee, \$50.
- 44.122 Private Instrumental or Vocal Study (2)**
Limited to students not majoring in music.
Prerequisite: For piano students, 43.116 or audition. Fee, \$100.
- 44.131 Private Instrumental or Vocal Study (1)**
Limited to students majoring in music.
Prerequisite: For piano students, 43.116. Fee, \$30.
- 44.132 Private Instrumental or Vocal Study (2)**
Limited to students majoring in music.
Prerequisite: For piano students, 43.116 or audition. Fee, \$60.

- 44.221 Private Instrumental or Vocal Study (1)**
 Limited to students not majoring in music or music majors on secondary instruments.
Prerequisite: 44.121 or equivalent. Fee, \$50.
- 44.222 Private Instrumental or Vocal Study (2)**
 Limited to students not majoring in music.
Prerequisite: 44.122 or equivalent. Fee, \$100.
- 44.231 Private Instrumental or Vocal Study (1)**
 Limited to students majoring in music.
Prerequisite: 44.131 or equivalent. Fee, \$30.
- 44.232 Private Instrumental or Vocal Study (2)**
 Limited to students majoring in music.
Prerequisite: 44.132 or equivalent. Fee, \$60.
- 44.321 Private Instrumental or Vocal Study (1)**
 Limited to students not majoring in music or music majors on secondary instruments.
Prerequisite: 44.221 or equivalent. Fee, \$50.
- 44.322 Private Instrumental or Vocal Study (2)**
 Limited to students not majoring in music.
Prerequisite: 44.222 or equivalent. Fee, \$100.
- 44.331 Private Instrumental or Vocal Study (1)**
 Limited to students majoring in music.
Prerequisite: 44.231 or equivalent. Fee, \$30.
- 44.332 Private Instrumental or Vocal Study (2)**
 Limited to students majoring in music.
Prerequisite: 44.232 or equivalent. Fee, \$60.
- 44.334 Private Instrumental or Vocal Study (4)**
 Enrollment limited. Recital required.
Prerequisite: Audition and permission of Department Chairman. Fee, \$60.
- 44.421 Private Instrumental or Vocal Study (1)**
 Limited to students not majoring in music or music majors on secondary instruments.
Prerequisite: 44.321 or equivalent. Fee, \$50.
- 44.422 Private Instrumental or Vocal Study (2)**
 Limited to students not majoring in music.
Prerequisite: 44.322 or equivalent. Fee, \$100.
- 44.431 Private Instrumental or Vocal Study (1)**
 Limited to students majoring in music.
Prerequisite: 44.331 or equivalent. Fee, \$30.
- 44.432 Private Instrumental or Vocal Study (2)**
 Limited to students majoring in music.
Prerequisite: 44.332 or equivalent. Fee, \$60.
- 44.434 Private Instrumental or Vocal Study (4)**
 Enrollment limited. Recital required.
Prerequisite: Audition and permission of Department Chairman. Fee, \$60.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses are open only to graduate students.)

HISTORY AND LITERATURE

43.500 The Baroque Era (3)

The emergence and development of vocal and instrumental musical styles and techniques from Monteverdi to Bach and Handel; lectures illustrated with recordings; taped listening assignments.

Prerequisite: 43.301 or concurrent registration.

43.501 The Classic Era (3)

The growth of new musical forms and ideas from the pre-classicists to Haydn, Mozart and Beethoven; lectures illustrated with recordings; taped listening assignments.

Prerequisite: 43.301 or concurrent registration.

43.502 The Romantic Period (3)

Historical and cultural background; intensive study of the composers and works of the period; emphasis on individual styles; nationalism, program music.

Prerequisite: 43.301.

43.503 Music of the Twentieth Century (3)

A survey of contrasting musical ideas and attitudes from 1900 to the present, with emphasis on the styles of selected major composers; lectures illustrated with recordings; taped listening assignments.

Prerequisite: 43.301.

43.504 Studies in Music Literature (3)

Survey of a pre-selected area, such as chamber music, orchestral music, keyboard music, choral music, etc. May be repeated for credit if no content duplication is involved.

Prerequisite: 43.301 or concurrent registration.

43.505 Studies in Music History (3)

The history of a pre-selected area, such as opera, music theory, musical instruments, etc. May be repeated for credit if no content duplication is involved.

Prerequisite: 43.301 or concurrent registration.

43.510 Introduction to Musicology (3)

Bibliographical studies; transcription of early notations; preparation of papers for written or oral presentation.

Prerequisite: 43.301.

43.555 Collegium Musicum (1)

Preparation and performance of vocal and instrumental music, mainly for various small ensembles, with emphasis on music before 1750; use of departmental collection of replicas of early instruments (lute, viol, sackbut, cromorne, recorders, cornetti, harpsichords). Graduate students are expected to direct ensembles as well as perform. May be taken up to three times for credit.

Prerequisite: Audition.

43.570 Music in Worship (3)

An historical survey of music on both fixed and free liturgies.

Prerequisite: 43.301.

- 43.670 Seminar in Church Music (3)**
Studies in pre-selected areas of church music. May be repeated for credit if no duplication is involved.
Prerequisite: 43.570 or concurrent registration.
- 43.680 Medieval Music (3)**
Advanced study of music in the Middle Ages with special attention to origin and development of music forms, illustrated by recordings; taped listening assignments.
Prerequisite: 43.301.
- 43.701 Renaissance Music (3)**
Intensive study of forms, style, techniques, and musical thought of the period; lectures illustrated with recordings; taped listening assignments.
Prerequisite: 43.680.
- 43.702 Musicology Seminar (3)**
Advanced study in pre-selected areas, such as notation, performance practices, the Italian madrigal, etc. May be repeated for credit if no duplications is involved.
Prerequisite: nine hours of advanced history and literature courses, including 43.510.
- 43.797 Master's Thesis Seminar (3-6)**
Prerequisite: 43.510 for all candidates preparing a research thesis; 43.702 for Theory-Composition majors. Permission of Department Chairman required.

THEORY

- 43.507 Studies in Music Theory (3)**
Studies in depth in specific areas of theoretical concern, such as: Fugue, chance vs. control as compositional principles; and, techniques of variation. May be repeated for credit if no content duplication is involved.
Prerequisite: 43.305
- 43.515 Advanced Conducting (3)**
The conductor's role in the preparation and presentation of the more complex masterworks. Students will be expected to participate in laboratory conducting experiences. May be repeated for credit.
Prerequisite: 43.306 and 43.307 or the equivalent.
- 43.700 Analytical Studies (3)**
Analysis of specified works, composers, styles, idioms, forms. Period covered is announced when offered. May be repeated for credit.
Prerequisite: 43.305.
- 43.703 Advanced Composition (3)**
Guidance in writing large forms. Assignments adapted to individual needs and talents. May be repeated for credit.
Prerequisite: 43.316.
- 43.704 Twentieth Century Counterpoint (3)**
Study of important contrapuntal styles of the past sixty years through analysis. Practical creative writing problems in each style studied.
Prerequisite: 43.305.

MUSIC EDUCATION

- 43.540 Introduction to Graduate Study in Music Education (3)**
Methods of research, bibliographical materials, library resources, and study techniques directed specifically toward music education objectives. Required of all graduate students in Music Education.

- 43.560 Music Education Workshop (Instrumental) (4)**
Advanced study of instrumental music in the elementary, junior and senior high school. May be repeated for credit.
Prerequisite: 43.360.
- 43.561 Music Education Seminar (Vocal) (3)**
Advanced study of vocal music in the elementary, junior and senior high school.
Prerequisite: 43.361 and 43.362.
- 43.740 Supervision and Administration of Music Education (3)**
Nature and scope of supervision, supervisory relationships, procedures and techniques; organization and improvement of music curricular, administration of music programs and development of evaluative criteria.
- 43.760 History and Philosophy of Music Education (3)**
Music in history and the practices of teaching music in historical perspective; correlation of philosophies in music and music education.

APPLIED MUSIC

- 43.550 Pedagogy I (2)**
A seminar to explore concepts of vocal and instrumental performance and their application to teaching in the private studio.
Prerequisite: Permission.
- 43.551 Pedagogy II (2)**
A survey of literature and the teaching of instrumental and vocal techniques.
Prerequisite: 43.550.
- 44.791 Private Instrumental or Vocal Study (1)**
May be repeated up to six hours by a Master's Degree candidate in performance. Others limited to four hours.
Prerequisite: 44.432 or equivalent and written permission of the Department. Fee, \$50.
- 44.792 Private Instrumental or Vocal Study (2)**
May be repeated up to six hours by a Master's Degree candidate in performance. Others limited to four hours.
Prerequisite: 44.432 or equivalent and written permission from the Department. Fee, \$100.

Philosophy and Religion

Professor:

HAROLD A. DURFEE
(on leave, Fall 1968)

Associate Professors:

ROBERT C. LESTER
THEODORE R. ROSCHE
ROGER T. SIMONDS

Assistant Professors:

CHARLEY D. HARDWICK
HEIMO E. M. HOFMEISTER
DAVID F. T. RODIER
WILLIAM M. WIEBENGA
(Acting Chairman)

Instructors:

JOHN E. KIMMELL
JAN K. LUDWIG

Professorial Lecturers:

ISAAC FRANCK
CHRISTOPHER B. GARNETT, JR.

Lecturers:

EUGENE J. LIPMAN
LAURA M. SCHRENK
SHARON SCHWARZE

UNDERGRADUATE DEGREE Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities are normally satisfied by major and related requirements.	
	Consult department	(12 hours)
	Science and Mathematics	(12 hours)
	Social Science	(12 hours)

Language Requirement	One language is required through the intermediate level: French, German, Greek or Latin. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.
----------------------	---

PHILOSOPHY

Departmental Requirements	MAJOR COURSES (30 hours)
	Students majoring in Philosophy complete 47.100 Logic and Scientific Method, and 27 hours in Philosophy at the 300-level and above, including 47.300-301 History of Philosophy.
	RELATED COURSES (minor department) (12 hours) Courses at the 300-level and above in one department.

RELIGION

MAJOR COURSES (33 hours)

Students majoring in Religion are required to complete 47.150 Introduction to the Old Testament and 47.170 Introduction to the New Testament, 47.370-371 History of Christian Thought, 47.550 Studies in Non-Christian Religions, 15 additional hours in Religion, and 3 hours in Philosophy.

RELATED COURSES (Minor Department) (12 hours)

Courses at the 300-level and above in one department.

PHILOSOPHY AND RELIGION

MAJOR COURSES (36 hours)

Students completing a combined major in Philosophy and Religion are required to complete 6 hours from 47.150 Introduction to the Old Testament, 47.170 Introduction to the New Testament, 47.180 Introduction to Religious Thought. They also are required to complete 47.100 Logic and the Scientific Method, 47.300-301 History of Philosophy, and 21 additional hours in Philosophy and Religion chosen from 300-level courses and above. These 21 hours must include a 500-level course in both Philosophy and Religion and must include 9 hours in both Philosophy and Religion.

RELATED COURSES (minor department) (12 hours)

Courses at the 300-level and above in one department.

ELECTIVES

Students are required to complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

Master of Arts in Philosophy

Two means are available for achieving an M.A. degree in Philosophy:

First Method COURSE REQUIREMENTS

Minimum of 30 hours of approved graduate work including 47.797 Master's Thesis Seminar (6).

WRITTEN COMPREHENSIVE EXAMINATION

One eight-hour examination in Philosophy (administered in two days, four hours each day).

GRADUATE COMPREHENSIVES

Examination Fields 47.01A and 47.01B Philosophy.

OTHER REQUIREMENTS

Proficiency examination in French or German. Thesis and oral defense of thesis.

Second Method Qualify for and pass four written Ph.D. comprehensive examinations.

Master of Arts in Religion

COURSE REQUIREMENTS

Minimum of 30 hours of approved graduate work, including 47.797 Master's Thesis Seminar (6).

WRITTEN COMPREHENSIVE EXAMINATIONS

Three, including one in the History of Religion with special emphasis upon a selected non-Christian religion, one in the English Bible with special emphasis upon a selected author, and one in the History of Christian Thought with special emphasis upon a selected classical figure or a related field.

OTHER REQUIREMENTS

Proficiency examination in French, German, Greek, or Hebrew. Thesis and oral defense of thesis.

GRADUATE COMPREHENSIVE EXAMINATION FIELDS

47.003 History of Religion (with special emphasis upon a selected non-Christian religion).

47.004 English Bible (with special emphasis upon a selected author)

47.021 History of Christian Thought (with special emphasis upon selected classical figure in the same).

Doctor of Philosophy in Philosophy

General Requirements See page 36.

Minimum of 72 hours of approved graduate work are required of which at least 30 hours (plus 24 hours of dissertation seminar) must be completed in residence at The American University.

Admission For consideration for admission, a student is recommended to have a superior undergraduate record and taken the Graduate Record Examination. Two letters of recommendation are required.

Course Requirements Forty-eight hours of courses plus 24 hours of dissertation seminar are required.

Tools of Research Two language proficiency examinations, French and German, or an acceptable substitute are necessary.

Written Comprehensive Examinations Four are required, to include:

1. History of Philosophy
2. Logic and Philosophy of Science
3. Metaphysics and Epistemology
4. Value Theory

Advancement to Candidacy Within six months after passing comprehensive examinations the student is to pass an oral examination in a field selected by him subject to departmental approval. Upon the successful completion of the oral examination the student will be advanced to candidacy for the doctoral degree.

Dissertation and Oral Defense The doctoral candidate is required to enroll for 24 hours of dissertation seminar.

Comprehensive Examination Fields

- 47.010 History of Philosophy
- 47.015 Logic and Philosophy of Science
- 47.020 Metaphysics and Epistemology
- 47.025 Value Theory

UNDERGRADUATE COURSES

Philosophy

47.100 Logic and the Scientific Method (3)

Introduction to the nature of valid inference and its relation to the scientific method. Principles of inductive and deductive reasoning.

47.101 Introduction to Philosophy (3)

Questions man has asked about himself, the world, and the origin, purpose and destiny of life; representative answers given by the great thinkers.

47.102 Philosophies Men Live By (3)

A study of selected philosophers in the history of western thought, and their relevance to human existence.

47.300 History of Philosophy: Ancient and Medieval (3)

Historical survey of representative philosophers from the early Greeks through the Middle Ages. Not open to Freshmen.

47.301 History of Philosophy: Modern (3)

Philosophers from the Renaissance to Hegel. Not open to Freshmen.

47.302 History of Philosophy: Recent (3)

Philosophers from Hegel to contemporary existentialism and linguistic analysis. Not open to Freshmen.

47.303 American Philosophy (3)

Backgrounds and substance of American philosophy since colonial times. Role of philosophical ideas. European and indigenous, in the growth of the American culture.

Prerequisite: three hours of philosophy.

47.305 Philosophies of the East (3)

Systems of thought in the East from ancient to modern times. Special emphasis upon philosophies of Confucianism, Taoism, Hinduism, and Buddhism.

47.310 Ethics (3)

Inquiry into the principles of moral evaluation, their relation to factual judgment, and individual and social behavior. Evaluation of traditional schools and theories of ethics.

Prerequisite: three hours of philosophy.

47.311 Aesthetics (3)

Nature of beauty and the relation of the philosophy of the beautiful to the fine arts and to human experience.

Prerequisite: three hours of philosophy.

Religion

BIBLICAL STUDY

47.150 Introduction to the Old Testament (3)

Emphasis upon the substantive content of the Bible. Special attention to the historical method and the canon of Biblical interpretation.

47.170 Introduction to the New Testament (3)

A literary, historical and theological study of the New Testament with particular attention upon Jesus, Paul and the development of the Christian movement.

47.180 Introduction to Religious Thought (3)

Introduction to the nature of religion and essential religious concepts.

CHRISTIAN THOUGHT

47.370 **History of Christian Thought I (3)**

Survey of Christian thought from apostolic times through medieval period to Erasmus. Special attention to the rise of orthodoxy and heresy, in representative thinkers and councils.

47.371 **History of Christian Thought II (3)**

Analysis of the thought of the Protestant and Roman Catholic Reformations of the 16th century. The development and place of Christian ideas in the rise of modern secular culture.

47.374 **Topics in Contemporary Religious Discussion (3)**

Topics in contemporary religious discussion within or between Protestantism, Catholicism (Roman and Eastern Orthodox), and Judaism. For fall 1968, The Church and the World; Scripture and Tradition—Since Vatican II; for spring 1969, Christianity and Judaism.

Prerequisite: 3 hours of philosophy or religion.

47.380 **Psychology of Religion (3)**

Psychological appraisal of religious experience, prayer, worship, belief, interpersonal relationships, religious practices and behavior.

HISTORY OF RELIGION

47.383 **Comparative Religion (3)**

Synoptic study of the world's living religions, their founders, literature, teachings and values.

47.394 **Post-Biblical Judaism (3)**

The development of Judaism from the Maccabean period to the present. Selected philosophical, theological, institutional movements in Jewish faith and practice.

Prerequisite: 47.150.

3.430 **Primitive Religions (3)**

Varieties of religious experiences and expressions exclusive of the great world religions. Role of religion in influencing behavior and in integrating particular societies, cultures.

Prerequisite: 3.201.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 700-level courses are open only to graduate students.)

PHILOSOPHY

47.500 **Studies in Major Philosophers (3)**

Reading and analysis of leading historical philosophers. For Fall 1968, Leibniz. For Spring 1969, Hume.

Prerequisite: nine hours of philosophy.

47.502 **Studies in Recent Philosophers (3)**

Reading and analysis of selected philosophers since Hegel as the background of contemporary philosophical movements.

Prerequisite: nine hours of philosophy.

47.504 **Contemporary Philosophy (3)**

Study of a leading contemporary movement in philosophy. For Fall 1968, Logical Positivism. For Spring 1969, Ordinary Language Analysis.

Prerequisite: nine hours of philosophy.

- 29.504 Philosophy of History (3)**
Contemporary issues in the philosophy of history, with special attention to problems of meaning and structure in the historical process, considered in the light of their historical roots.
Prerequisite: three hours of philosophy.
- 47.506 Selected Topics in Philosophical Analysis (3)**
A study of selected issues in philosophy. For Fall 1968, Value and Situation Ethics; Analytic Ethics. For Spring 1969, Freedom and Law: the Nature of Philosophical Systems.
Prerequisite: nine hours of philosophy.
- 47.508 Philosophy of Religion (3)**
Study of a leading contemporary movement in philosophy of religion.
Prerequisite: nine hours of philosophy.
- 47.520 Symbolic Logic (3)**
An analysis of the development and use of symbolism in modern logic and its relevance to the clarification of logical problems.
Prerequisite: 47.100.
- 47.521 Logical Analysis (3)**
The application of logical theory to philosophical discourse.
Prerequisite: 47.520.
- 47.525 Philosophy of Science (3)**
A study of the relationship of modern philosophy to the findings of modern science.
Prerequisite: 47.100.
- 47.530 Social Philosophy (3)**
A study of the leading proposals regarding the philosophical foundation of modern culture and society.
Prerequisite: three hours of philosophy.
- 47.702 Graduate Seminar in Philosophy (3)**
An intensive study of selected philosophical problems.
Prerequisite: twelve hours of philosophy.
- Topics:
- | | |
|--------------------------|-----------------------------|
| I. History of Philosophy | VI. Value Theory |
| II. Metaphysics | VII. Philosophy of Religion |
| III. Logic | VIII. Social Philosophy |
| IV. Epistemology | IX. Eastern Philosophy |
| V. Philosophy of Science | |
- For Fall 1968, History of Philosophy: Neo-Platonism.
For Spring 1969, History of Philosophy: Augustine.
- 47.797 Master's Thesis Seminar (3-6)**
Directed research of M.A. thesis proposal.
Prerequisite: Permission.
- 47.799 Doctoral Dissertation Seminar (12)**
Directed research of Ph.D. dissertation proposal.
Prerequisite: Permission.

RELIGION

- 47.550 Studies in Non-Christian Religions (3)**
A study of the theology and literature of non-Christian religious movements. For Fall 1968, Hinduism. For Spring 1969, Buddhism.
Prerequisite: 47.305 or 47.383.

47.560 Selected Biblical Studies (3)

Study of selected topics in Biblical literature. For Fall 1968, Job and Wisdom Literature.

Prerequisite: 47.150.

For Spring 1969, The Gospel of John.

Prerequisite: 47.170.

47.570 Problems of Religious Thought (3)

Examination of basic problems and issues in religious thought both classical and contemporary. For Fall 1968, Tillich. For Spring 1969, Bultmann.

Prerequisite: 3 hours of philosophy or religion.

47.797 Master's Thesis Seminar (3-6)

Directed research of M.A. thesis proposal.

Prerequisite: Permission.

Physics

MARK HARRISON (*Chairman*)
BANCROFT W. SITTERLY
(*Emeritus*)
EARL R. CALLEN
WIESLAW CZYZ
(*Visiting Professor*)
JOHN A. WHITE

C. M. DAVIS, JR.
JACEK JARZYNSKI
RICHARD V. WATERHOUSE
(on leave 1968-69)

BENSON T. CHERTOK
GLORIA DE WIT
R. B. KAY

FERNAND D. BEDARD
RANDALL S. CASWELL
WILLIAM R. DODGE
HOWARD R. REISS

MARVIN M. COHEN

UNDERGRADUATE DEGREE
Bachelor of Science

University Requirements See page 29.

Composition and Reading	(6 hours)
Physical Education	(4 units—non-credit)
Humanities	(12 hours)
Science and Mathematics are normally satisfied by major and related requirements. Consult Department.	(12 hours)
Social Sciences	(12 hours)

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Recommended Languages: French, German or Russian

Departmental Requirements Students majoring in physics should register for 51.220-221 Fundamentals of General Physics I and II at the earliest opportunity. Concurrent registration in 41.222-223 Differential and Integral Calculus I and II is required. It is strongly urged these courses to be taken in the freshman year if possible. This will necessitate a waiver examination for the 41.110-111 Fundamentals of Mathematics I and II or taking this course or its equivalent the summer before the freshman year. The normal prerequisites to courses at the 300-level and above are 51.220-221 Fundamentals of General Physics I and II.

mentals of General Physics I and II. However, with superior performance, 51.210-211 Elements of General Physics may be substituted provided approval of the departmental advisor is obtained. A grade of C or better is required for all major, tool and related courses.

MAJOR COURSES (43 hours)

- 51.220-221 Fundamentals of General Physics I and II (8)
- 51.222-223 General Physics Laboratory I and II (2)
- 51.330-331 Principles of Mechanics I and II (6)
- 51.450-451 Electricity and Magnetism I and II (6)
- 51.570 Introduction to Quantum Mechanics (3)
- 51.572 Atomic Physics (3)
- 51.573 Nuclear Physics (3) or 51.579 Solid State Theory (3)
- 51.541 Optics (3) or 51.531 Acoustics (3)
- 51.560 Thermodynamics and Statistical Physics (3)
- 51.580-581-582-583 Advanced Physics Laboratory I, II, III, and IV (6)

RELATED COURSES (8-11 hours)

- 15.100-111 General Chemistry I and II (8)
- Three additional hours selected from 47.521 Philosophy of Science (3), or 81.506-507 History of Scientific Thought I and II (3, 3) are recommended.

TOOL COURSES (20-23 hours)

- 41.110-111 Fundamentals of Mathematics I and II (6)
- 41.222-223 Differential and Integral Calculus I and II (8)
- 41.321 Differential Equations (3)
- 51.500 Introduction to Mathematical Physics I (3)
- Students planning to continue on to graduate work in physics are advised to also take 51.501 Introduction to Mathematical Physics II (3)

Electives To complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

Master of Science

General Requirements A minimum of 30 hours of approved graduate work is required.

Core Courses It is expected that the student will advance his knowledge of basic theory in the core areas of physics. Accordingly, it is expected that the student will take most of the following core courses at an early date:

- 51.630-631 Theoretical Mechanics I, II
- 51.650-651 Electromagnetic Theory I, II
- 51.660-661 Statistical and Thermal Physics I, II
- 51.670-671 Quantum Mechanics I, II

While it is desirable to take all of these core courses inasmuch as they provide a conceptual foundation, and are accordingly strongly represented on the Comprehensive Examinations, the student's program should also include such specialized courses as are required by the Research Training Program. The appropriate balance of core courses and specialized courses should be worked out with the student's adviser as described below.

Research Training Program In order to expedite the student's research training, it is required that the student will sequentially register during his first year of graduate work for two semesters of the one credit course 51.699 Current Topics in Physics. In the first semester of this course, he is required to select an adviser with whom he will plan a program of specialized courses to complement the appropriate core courses given above. The student then continues his research training by registering for six hours of either 51.795 Research Training Seminar or 51.797 Master's Thesis Seminar.

Written Comprehensive Examinations Two approved fields: 51.001 Mechanics and Modern Physics, 51.002 Electromagnetism and Optics, Thermal and Statistical Physics.

Doctor of Philosophy

General Requirements. See page 31.

A minimum of 72 hours of approved graduate work is required.

Qualifying Examination It is required that the student take a qualifying examination at an early date after entrance into the doctorate program. The Qualifying Examination is the above M.S. Comprehensive Examination and may be waived by M.S. students who score distinction.

Core Courses The student is required to have completed 51.630-631 Theoretical Mechanics I and II (6), 51.650-651 Electromagnetic Theory I and II (6), 51.660-661 Statistical and Thermal Physics (6), and 51.670-671 Quantum Mechanics I and II (6). The student is required to register for two hours of 51.699 Current Topics in Physics.

Tool of Research Proficiency is required in one language, preferably chosen from Russian, German or French, or other tool approved by the Department.

Dissertation The student is required to take oral examinations in defense of his dissertation research.

Oral Examination The student is required to take oral examinations in defense of his dissertation and over the basic material relevant to the area of research.

Written Comprehensive Examinations Two approved examinations: 51.005, 51.006 Ph.D. Comprehensive Examinations I, II. These examinations cover the subject area of the dissertation and material relevant to the area of research.

UNDERGRADUATE COURSES

51.100 The Science of Physics (3)

A non-mathematical discussion of topics from classical and modern physics for students with little or no background in physics. No laboratory.

51.210 Elements of General Physics I (3)

Mechanics, heat, and sound. Three hours of lecture.

Prerequisite: 41.111.

- 51.211 Elements of General Physics II (3)**
Electricity and magnetism, light, modern physics. Three hours of lecture.
Prerequisite: 51.210.
- 51.220 Fundamentals of General Physics I (4)**
An intensive treatment of mechanics, heat, sound and electrostatics. For students of the physical and mathematical sciences. Three hours of lecture, two hours of recitation.
Prerequisites: 41.222 or concurrent registration.
- 51.221 Fundamentals of General Physics II (4)**
An intensive treatment of electromagnetism, optics, and a survey of modern physics for students of the physical and mathematical sciences. Three hours of lecture, two hours of recitation.
Prerequisites: 51.220; 41.223 or concurrent registration.
- 51.222 General Physics Laboratory I (1)**
Selected experiments to accompany 51.210 and 51.220.
Prerequisites: 51.210 or 51.220 or concurrent registration.
- 51.223 General Physics Laboratory II (1)**
Selected experiments to accompany 51.211 and 51.221.
Prerequisites: 51.211 or 51.221 or concurrent registration.
- 51.330 Principles of Mechanics I (3)**
Vector analysis, dynamics and kinematics of particles, moving reference systems, central forces and celestial mechanics, dynamics of system of particles, planar rigid body mechanics.
Prerequisites: 51.221; 41.321 or concurrent registration.
- 51.331 Principles of Mechanics II (3)**
General mechanics of rigid bodies, Lagrange's and Hamilton's equations (of motion), vibration theory and normal modes, wave propagation and boundary value problems, special theory of relativity.
Prerequisites: 51.330, 41.321.
- 51.410 Special Topics Laboratory (1)**
Selected experiments to accompany intermediate courses in mechanics, heat, acoustics, optics, and modern physics. Individual assignments. Three hours of laboratory.
Prerequisite: permission.
- 51.450 Electricity and Magnetism I (3)**
Vector analysis, electrostatic fields, potential theory and boundary value problems, dielectric media, direct current circuits, magnetic fields, magnetic media, electromagnetic induction.
Prerequisites: 51.221; 41.321 or concurrent registration.
- 51.451 Electricity and Magnetism II (3)**
Alternating current circuits and transmission lines, Maxwell's equations, propagation of electromagnetic waves, boundary value problems, guided waves, generation of electromagnetic waves and antennas.
Prerequisites: 51.330, 41.321.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses are open only to graduate students.)

- 51.500 Introduction to Mathematical Physics I (3)**
The following topics will be related to various areas of physics: differential

equations, infinite series, scalar and vector fields, curvilinear coordinates, matrices and tensors, Fourier series, and partial differential equations.
Prerequisites: 51.331, 51.451, 41.321.

51.501 Introduction to Mathematical Physics II (3)

The following topics will be related to various areas of physics: special functions of mathematical physics and boundary value problems, Fourier and Laplace transforms, Sturm-Liouville theory, Green's functions, variational methods, complex variable and contour integration, and probability theory.
Prerequisite: 51.500.

51.531 Acoustics (3)

Vibrating systems, dynamical analogies. Transients and random noise. Wave propagation in strings, membranes, bars, and fluids. The wave equation and its solution in one, two and three dimensions. Radiation, reflection, refraction and diffraction.
Prerequisites: 51.500 or concurrent registration.

51.541 Optics (3)

Maxwell's equations and electromagnetic waves, reflection and refraction, interaction of light with matter, interference phenomena, Huygen's-Kerchhoff diffraction theory, Fresnel and Fraunhofer diffraction, gratings, optical instruments.
Prerequisites: 51.331, 51.451.

51.554 Principles of Electronics (3)

Circuit analysis, circuit theorems, physics of vacuum tubes and transistors, equivalent circuits. Analysis of power supplies, amplifiers and oscillators. Modulation, demodulation and pulse circuits.
Prerequisites: 51.451, 51.581, 41.321.

51.560 Thermodynamics and Statistical Physics (3)

Heat temperature, the first and second laws of thermodynamics, cycles, reversibility, entropy changes, and the thermodynamic potentials. Kinetic theory and transport phenomena. Statistical interpretation of thermodynamics, definition of entropy, Maxwell-Boltzman, Bose-Einstein, and Fermi-Dirac statistics.
Prerequisite: 51.572.

51.570 Introduction to Quantum Mechanics (3)

The historical background to quantum mechanics, particles and waves, the Schroedinger equation, potential barriers and potential wells, the simple oscillator, the one-electron atom, angular momentum, eigenfunctions, eigenvalues, and degeneracies.
Prerequisites: 41.321; 51.331 and 51.451 or concurrent registration.

51.572 Atomic Physics (3)

Review of elementary quantum mechanics, time dependent and time independent perturbation theory, magnetic moments, spin, identical particles and the exclusion principles, multielectron atoms, transition rates and selection rules, interaction of radiation with matter.
Prerequisite: 15.570.

51.650 Electromagnetic Theory I (3)

Electrostatics, potential theory, boundary value problems and Green's functions, dielectric media, magnetic fields and magnetic-media, Maxwell stress tensor, general theorems of momentum and energy, Maxwell's equations.
Prerequisites: 51.451, 51.501.

51.651 Electromagnetic Theory II (3)

Electromagnetic waves and boundary value problems, guided waves, scatter-

ing theory, radiation theory, diffraction theory, eikonal and WKB methods, advanced physical optics.

Prerequisite: 51.650.

51.654 Relativistic Theory (3)

Experimental basis for special relativity, relativistic kinematics and the Lorentz transformation, relativistic mechanics, covariant electrodynamics, Lienard-Wiechert potentials, Bremsstrahlung electrodynamic conservation laws, charged particle collisions and other applications.

Prerequisites: 51.631, 51.651.

51.660 Statistical and Thermal Physics I (3)

Principles and applications of classical thermodynamics. Fluctuations and irreversible thermodynamics. Classical statistical thermodynamics.

Prerequisites: 51.560; 51.630 or concurrent registration.

51.661 Statistical and Thermal Physics II (3)

Statistical ensembles. MB, BE, and FD statistics. Application to perfect gases. Method of Darwin-Fowler. Properties of crystals. Cooperative phenomena. Real gases.

Prerequisites: 51.660, 51.572.

51.662 Liquid State Theory (3)

Statistical theories of dense gases and liquids, cluster integrals, distribution functions; diagrammatic expansion techniques, Percus-Yevick, and hypernetted chain approximations.

Prerequisite: 51.661.

51.666 Atomic and Molecular Physics (3)

LS and JJ coupling schemes, Lamb shift, hyperfine structure, vibrating-rotator, Frank-Condon effect, inversions, reflections and nuclear spin states, Raman effect, optical pumping, level crossings, Hanle effect.

Prerequisite: 51.572.

51.669 Solid State Physics (3)

Free electron Fermi gas, energy bands, semiconductors, superconductivity, dielectric properties, ferroelectricity, magnetism, optical phenomena, point defects and dislocations.

Prerequisite: 51.579.

51.670 Quantum Mechanics I (3)

The experimental background to quantum mechanics, the Schroedinger equation, eigenfunctions and eigenvalues, the harmonic oscillator, the square well, the hydrogen atom, scattering.

Prerequisites: 51.572, 51.501, 51.631; 51.650 or concurrent registration.

51.671 Quantum Mechanics II (3)

The matrix formulation of quantum mechanics, approximate methods, angular momentum and spin, radiation, application to atoms, molecules, and solid state.

Prerequisite: 51.670.

51.672 Advanced Quantum Mechanics I (3)

Lorentz group. Relativistic and particle quantum mechanics of spin 0 and spin $\frac{1}{2}$ particles. Electromagnetic interactions. Feynman propagations, S-matrix, Feynman diagrams, and various applications.

Prerequisites: 51.671; 51.654 or concurrent registration.

51.673 Advanced Quantum Mechanics II (3)

Lagrangian field theory, quantization of free fields, interactions and covariant perturbation theory. Quantum electrodynamics: renormalization, radiative corrections in scattering, Lamb shift.

Prerequisite: 51.672.

- 51.674 Elementary Particle Physics (3)**
Mass spectra of the baryons, mesons and leptons; properties such as spin, isospin, parity, G-parity, strangeness, etc.; strong, electromagnetic and weak interactions; classification schemes; unitary symmetry.
Prerequisite: 51.673.
- 51.675 High Energy Physics (3)**
High energy elementary particle interactions, quantum field theory, symmetries, and S-matrix theory; strong interactions, pion-nucleon dispersion relations, partial wave amplitudes, electromagnetic form factors; weak interactions, beta decay, PCT, strange particle decays.
Prerequisite: 51.673.
- 51.676 Nuclear Theory I (3)**
Internucleon forces, moments and shapes, shell model, nuclear coupling schemes, nuclear matter problems and collective nuclear motions.
Prerequisites: 51.573 and permission.
- 51.677 Nuclear Theory II (3)**
Electromagnetic properties of nuclei, beta decay, theory of nuclear reactions including collision matrix and dispersion theory, compound nucleus and statistical theories, optical model, and direct reactions.
Prerequisite: 51.676.
- 51.678 Advanced Solid State Physics I (3)**
Crystal lattices and groups, thermal, electric, and magnetic properties of solids, free-electron and band theory of metals and semiconductors, law temperature phenomena.
Prerequisite: 51.671 or permission.
- 51.679 Advanced Solid State Physics II (3)**
Lattice vibrations, order-disorder transformations, phonon-electron interactions, quantum theory of ferromagnetism and relaxation phenomena.
Prerequisite: 51.678.
- 51.681 Quantum Electronics (3)**
Quantum properties of atoms and light, linear and non-linear interactions between coherent light and matter, theory of light amplifiers and oscillators (lasers).
Prerequisites: 51.541, 51.572.
- 51.699 Current Topics in Physics (1)**
Weekly seminar on recent advances in physics as reported by the current literature. Presentations will alternate between graduate students and invited speakers. Compulsory for all degree candidates.
- 51.781 Liquid Metals Seminar (3)**
The nearly free-electron model and its application to electron transport properties of liquid metals; electron states in liquid metals; relationship between metal theory and liquid state theory.
Prerequisite: permission.
- 51.790 Research Seminar in Physics (3-6)**
Various topics in advanced physics with contents selected according to need.
Prerequisite: permission.
- 51.795 Research Training Seminar (3-6)**
Prerequisite: 51.699.
- 51.797 Master's Thesis Seminar (3-6)**
- 51.799 Doctoral Dissertation Seminar (3-6)**

Political Science

The program and undergraduate degree of Bachelor of Arts in Political Science are available through registration in either the College of Arts and Sciences or the School of Government and Public Administration.* In either case the student fulfills the University Requirements and completes approximately the same major course pattern. In addition, the student in the College of Arts and Sciences must meet the foreign language requirement and pass the Graduate Record Examination before the end of the senior year.

All majors in Political Science, whether in the School of Government and Public Administration or the College of Arts and Sciences, will look to the Associate Dean, School of Government and Public Administration, and the faculty advisors who assist him for program counseling.

UNDERGRADUATE DEGREE

Bachelor of Arts

University Requirements Composition and Reading (6 hours)
Physical Education (4 units—non-credit)
Humanities (12 hours)
Science and Mathematics (12 hours)
Social Sciences are normally satisfied by major and related requirements.
Consult advisor. (12 hours).

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Departmental Requirements MAJOR AND RELATED REQUIREMENTS

Foundation Courses: All 15 hours are required:

- 53.100 Modern Government (3)
- 53.150 U. S. Political System I (3)
- 53.250 U. S. Political System II (3)
- 33.200 Introduction to World Politics (3)
- 53.300 Research and Political Science I (3)

* See page 331 S.G.P.A. program and course descriptions.

Fields of Specialization: 18 hours required to be completed by: 6 hours in each of three fields; or, 6 hours in each of two fields and 3 hours in each of two others. No more than two SIS fields may be used to fulfill this requirement.

A. Theory of Politics and Government

53.310 Political Theory I (3)

53.410 Political Theory II (3)

B. Foreign and Comparative Government

53.330 Comparative Government I (3)

53.430 Comparative Government II (3)

C. International Relations

33.500 Introduction to International Law (3)

33.440 Introduction to International Organ (3)

D. International Relations

33.530 American Foreign Policy (3)

33.302 Foreign Policies of the Great Powers (3)

E. International Relations

Introduction to an Area Study (3)

International Relations of that Area (3)

F. Public Law and Legal System

53.350 U. S. Constitutional Law I (3)

53.450 U. S. Constitutional Law II (3)

G. The Political and Electoral System

53.351 Political Dynamics (3)

53.451 Political Parties and Interest Groups (3)

H. National Policy Process (3)

53.352 Legislative Process (3)

53.452 National Executive (3)

I. Administrative System

53.353 Administrative Process (3)

53.453 The Bureaucracy (3)

J. The Metropolis

53.354 Government and the Metropolis (3)

53.454 Metropolitan Political Systems (3)

RELATED COURSE REQUIREMENTS:

18 more hours to include the following specific courses and social science courses at the 300 level or above (history and/or economics recommended).

19.100 Introduction to Economics I

19.101 Introduction to Economics II

Psychology

Professors:

FRED H. NOTHMAN (*Chairman*)
CHARLES K. TRUEBLOOD
(*Emeritus*)

Assistant Professors:

MICHAEL J. GURALNICK
JANICE M. PAGE
ANNETTE S. THOMPSON

Instructor:

BARBARA J. ROSE

Adjunct Professors:

IRWIN ALTMAN
MELVIN A. GRAVITZ
WILLIAM W. HAYTHORN
SAMUEL B. LYERLY

Professorial Lecturers:

S. NORMAN FEINGOLD
DALMAS A. TAYLOR

UNDERGRADUATE DEGREE

Bachelor of Arts

University Requirements Composition and Reading (6 hours)
Physical Education (4 units—non-credit)
Humanities (12 hours)
Science and Mathematics (12 hours)
Social Sciences are normally satisfied by major and related requirements.
Consult department. (12 hours)

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.

Departmental Honors Consult the Department concerning the honors program.

Departmental Requirements Psychology majors are required to take all of the following listed courses. In addition they must select two courses each from categories A and B.

(31 hours) beyond 57.200

- 57.200 General Psychology (3)
- 69.301 Psychological Statistics (3)
- 57.302 Advanced General Psychology (3)
- 57.403 History of Psychology (3)
- 57.490 Experimental Psychology (4)

Category A

- 57.460 Sensation and Perception (3)
- 57.480 Learning and Conditioning (3)
- 57.503 Psychology of Human Learning (3)
- 57.512 Motivation (3)
- 57.525 Physiological Psychology (3)

Category B

- 57.400 Child Psychology (3)
- 57.404 Social Psychology (3)
- 57.405 Psychological Tests and Measures (3)
- 57.530 Theories of Personality (3)
- 57.550 Abnormal Psychology (3)

The remaining six hours may be selected from any of the courses from categories A or B, or from the following:

- 57.307 Psychology of Adjustment (3)
- 57.310 Fields of Applied Psychology (3)
- 57.401 Adolescent Psychology (3)
- 57.504 Advanced Social Psychology (3)
- 57.521 Industrial Psychology (3)

RELATED COURSES (12 hours)

- 69.202 Basic Statistics (3) or equivalent—required as prerequisite for 69.301

In addition, the student should select 9 hours from areas other than psychology, with not more than 6 hours in a field. The selection may be made from, but is not limited to, the following fields: anthropology, biology, economics, education, mathematics, philosophy, sociology and statistics. For all fields, the specific courses must be approved by the major advisor. Courses must be at the 300-level or above, except for 41.222 and 41.223, Differential and Integral Calculus I and II (8) which will be acceptable.

Electives Other courses than the above are required to complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

The Department offers: A Master of Arts in: General-Experimental Psychology; in Counseling Psychology; and a Ph.D. in General-Experimental Psychology.

Master of Arts in General-Experimental Psychology

- General Requirements** A minimum of 30 hours of approved graduate work is required. Completion of the program customarily requires four semesters.
- Program Requirements** The program is shaped to the individual student's needs and interests but must include courses in Experimental Psychology, History and Systems, and Statistics.

- Written Comprehensive Examinations** Two examinations are required, one in General Psychology and one in Experimental Psychology. The examinations must be taken when 18 hours of graduate work have been completed.
- Other Requirements** To complete the degree the Master's Thesis Seminar and the completion of a thesis are required.

Master of Arts in Counseling Psychology

- General Requirements** A minimum of 30 hours of approved graduate work is required. Completion of the program customarily requires four semesters.
- Program Requirements** The program is shaped to the individual student's needs and interests but must include courses in Experimental Psychology, History and Systems, and Statistics. All students must enroll in courses in Counseling and in Tests and Measurements for their specialization.
- Written Comprehensive Examinations** Two examinations are required, one in General Psychology and one in Counseling and Testing. The examinations must be taken when 18 hours of graduate work have been completed.
- Other Requirements** Students in Counseling Psychology have an option of six hours of Practicum Training or six hours of Master's Thesis Seminar including the completion of a thesis.

Doctor of Philosophy

- General Requirements** A minimum of 72 hours of approved graduate work is required.
- Program Requirements** The doctoral program is currently being revised. Students should consult the Department as to requirements regarding core and related courses, as well as comprehensive examinations and the dissertation.
- Other Requirements** Proficiency examinations in two research tools are required (language and statistics).

UNDERGRADUATE COURSES

- 57.200 General Psychology (3)**
Introduction to the scientific study of behavior of organisms.
Prerequisite to all other offerings of the department.
- 57.302 Advanced General Psychology (3)**
Selected topics and critical issues in the major areas of psychology. Participation of individual students in experimental work is stressed.
Prerequisite: 57.200.
- 57.307 Psychology of Adjustment (3)**
Learning, motivational and biological characteristics of the individual in relation to his adjustment in society.
Prerequisite: 57.200.

57.310 Fields of Applied Psychology (3)

Applications of psychology in contemporary society.

Prerequisite: 57.200.

57.400 Child Psychology (3)

Study of development through infancy and childhood, with emphasis on learning, maturation, motivation, and social functions.

Prerequisite: 57.200.

57.401 Adolescent Psychology (3)

Development of the adolescent, with special consideration of the psychological bases of behavior.

Prerequisite: 57.200.

57.403 History of Psychology (3)

The historical development of major theoretical systems in psychology.

Prerequisite: 57.302.

57.404 Social Psychology (3)

Individual behavior as influenced by and demonstrated in group settings; evaluation of contemporary research and theoretical developments.

Prerequisite: 57.200.

57.405 Psychological Tests and Measures (3)

Fundamental principles of testing and critical survey of representative tests of achievement, intelligence, interest, aptitude and personality.

Prerequisite: 57.302.

57.410 Psychology for Law Enforcement Officers (3)

Prerequisite: permission of the Assistant Dean, College of Continuing Education.

57.460 Sensation and Perception (3)

Sensory processes and complex perceptual processes discussed in light of contemporary theories and research.

Prerequisite: 57.302.

57.480 Learning and Conditioning (3)

Evaluation of contemporary research and theories of animal and human behavior.

Prerequisite: 57.302.

57.492 Experimental Psychology (4)

A survey of the data and research methods in core areas of psychology.

Review of experimental design. Individual and group experiments.

Prerequisites: 57.302 and 69.301.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600- and 700-level courses are open only to graduate students.)

57.503 Psychology of Human Learning (3)

The study of the psychological processes involved in verbal behavior, memory, problem solving and thinking.

Prerequisites: Junior standing and 57.302 or permission of instructor.

57.504 Advanced Social Psychology (3)

Psychological factors in human social behavior. Social aspects of perception, motivation, thinking, language, attitudes, public opinion, persuasion, and prejudice.

Prerequisites: Junior standing; 57.302, 57.404 or permission of instructor.

- 57.505 Test Theory and Models (3)**
Theory of mental tests: assessment and prediction.
Prerequisites: 69.202 and 57.405 or equivalents.
- 57.512 Motivation (3)**
Theories of animal and human motivation and evaluation of contemporary research.
Prerequisites: Junior standing and 57.302 or permission of instructor.
- 57.521 Industrial Psychology (3)**
An introduction to the study of personnel selection and human relations in industry. The design and operation of man-machine systems.
Prerequisite: Junior standing and 57.200.
- 57.525 Physiological Psychology (3)**
A survey of the anatomical and physiological substrates of behavior.
Prerequisites: Junior standing; 57.302 or permission of instructor.
- 57.530 Theories of Personality (3)**
Review and critical evaluation of major personality theories and current research in the field.
Prerequisites: Junior standing and 57.302 or permission of instructor.
- 57.535 Instrumentation in the Behavioral Sciences (3)**
Theory, demonstrations and practical work covering the basic mechanical and electronic techniques used in behavioral research.
- 57.550 Abnormal Psychology (3)**
A study of behavior pathology in the human organism.
Prerequisites: Junior standing and 57.302 or permission of instructor.
- 57.600 Experimental Foundations of Clinical Psychology (3)**
The study of behavior, characteristics of the individual through methods of clinical measurement, observation, and psychotherapy. A study of research in the area.
Prerequisites: Graduate standing and permission of instructor.
- 57.601 Advanced Experimental Psychology I (3)**
Research methods.
Prerequisites: Graduate standing and permission of instructor.
- 57.602 Advanced Experimental Psychology II (3)**
Basic experimental facts and theories in the area of learning, cognition, and verbal behavior.
Prerequisites: Graduate standing and permission of instructor.
- 57.606 Assessment of Intellectual Functions (3)**
An examination of representative individual tests of intelligence and laboratory practice in the administration, scoring, and interpretation of these tests
Prerequisites: Graduate standing and permission of instructor.
- 57.620 Principles and Practices of Guidance (3)**
Principles and methods of counseling. Beginning course for counselors.
Prerequisites: Graduate standing and permission of instructor.
- 57.640 History and Systems of Psychology I (3)**
Philosophical and scientific background of modern psychology and contemporary problems in theory construction.
Prerequisites: Graduate standing and permission of instructor.
- 57.641 History and Systems of Psychology II (3)**
Continuation of 57.640.
Prerequisites: Graduate standing and permission of instructor.

- 57.660 Vocational Development and Occupational Information (3)**
The meaning of work in society, vocational development as personality theory, evaluation and utilization of occupational and educational information.
Prerequisites: Graduate standing and permission of instructor.
- 57.670 Techniques of Counseling (3)**
Techniques of vocational, educational and personal problem counseling.
Prerequisites: Graduate standing and permission of instructor.
- 57.691 Practicum Training (3-6)**
Practice, under qualified supervision, in technical procedures related to testing and counseling.
- 57.698 Directed Research (3-6)**
For M.A. candidates only.
- 57.797 Master's Thesis Seminar (3-6)**
- 57.798 Seminar in Psychology (3-6)**
May be repeated for credit.
Prerequisites: Graduate standing and permission of instructor.
I. Current Research in Social Psychology (3-6).
II. Psychometric Methods (3-6).
III. Current Research in Learning (3-6).
IV. The Cognitive Processes (3-6).
V. Current Researches in Sensation and Perception (3-6).
VI. Motivation and the Affective Processes (3-6).
- 57.799 Doctoral Dissertation Seminar (3-6)**

Sociology

Professors:

FRANK LORIMER (*Emeritus*)
 RAYMOND N. MORRIS
 (*on leave 1968-69*)
 ANNABELLE B. MOTZ
 JOHN C. SCOTT
 (*Associate Dean C.A.S.*)
 S. FREDERICK SFYMOUR
 AUSTIN VAN DER SLICE (*Chairman*)

Associate Professors:

GILLIAN L. GOELIN

Assistant Professors:

BARBETTE BLACKINGTON
 LEROY S. GRAHAM
 ROBERT F. HOLZ
 BARBARA H. KAPLAN
 DAVID N. RUTH
 HAROLD VAHR

Adjunct Professors:

HELEN MARTZ
 MORRIS ROSENBERG
 IVOR WAYNE
 ROBERT T. BOWER

Professorial Lecturers:

VLADIMIR DE SMITT
 VICTOR EVJEN
 ISAAC FRANCK
 JOHN J. GALVIN
 JOHN G. THEBAN

Lecturers:

JAMES A. MCCAFFERTY
 MARSHA BENNETT
 STUART AARONSON

UNDERGRADUATE DEGREE Bachelor of Arts

- University Requirements** Composition and Reading (6 hours)
 Physical Education (4 units non-credit)
 Humanities (12 hours)
 Natural Science are normally satisfied by major and related requirements. Consult department. (12 hours)
- Language Requirement** Through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University.
- Departmental Honors** Please consult this department concerning Departmental Honors.

Departmental Requirements

MAJOR COURSES

- 65.200 Introduction to Sociology
 65.410 Sociological Theory
 65.420-421 Introduction to Social Research I and II
 65.511 Theory of Social Research

At least two courses in the field of Social Organization; 65.340, 65.345, 65.346, 65.348, 65.445, 65.515.

One course in the area of Population and Ecology: 65.352 or 65.450

One course in Social Psychology: 65.391, 65.570, 65.591, 65.592, 65.593.

One Course in Social Change and Disorganization: 65.347, 65.360, 65.361, 65.365, 65.416

RELATED COURSES

Introductory courses (9 hours)

3.201 Introduction to Cultural Anthropology; 57.200, General Psychology; 69.202, Basic Statistics

Courses at 300 level and above (18 hours)

Twelve of these hours in one related field chosen in consultation with department adviser.

Electives To complete minimum of 120 hours plus non-credit physical education.

GRADUATE DEGREES

Master of Arts

Course Requirements A minimum of 30 hours of approved graduate work is required including:

65.510 Concepts of Sociology

65.511 Theory of Social Research

65.610-611 History of Sociological Theory I and II

65.612-613 Social Research Methods I and II

65.797 Master's Thesis Seminar (3-6)

Written Comprehensive Examinations Two are required, one in sociological theory and one in methods of social research.

Other Requirements At least one course above the introductory level in statistics or a departmental proficiency examination in statistics. Thesis and oral defense of thesis.

Doctor of Philosophy

Course Requirements See page 31 for basic requirements.

A minimum of 72 hours of approved graduate work is required including 65.799 Doctoral Dissertation Seminar.

Written Comprehensive Examinations A proficiency examination is required in two tools of research (German or French, and statistics). A dissertation and its oral defense is required.

Other Requirements Four are required, including one in sociological theory, one in methods of social research, one in complex organizations, and a fourth field selected from comparative social organization, social psychology (sociological) or an approved field outside of the department.

Graduate Comprehensive Examination Fields CORE FIELDS

65.001 Sociological Theory (M.A., Ph.D.)

65.002 Methods of Social Research (M.A., Ph.D.)

SPECIALIZED FIELDS

65.016 Comparative Social Organization (Ph.D. only)

65.024 Social Psychology: Sociological

An approved Ph.D. Comprehensive field outside of the department.

UNDERGRADUATE COURSES

65.200 Introduction to Sociology (3)*

Fundamental characteristics of social relationships. Culture, personality, population and ecology, social institutions and processes, cultural change. Honors selection permitted.

65.221 Marriage and Family Living (3)

Recent changes in the American family, including topics such as modern dating, mate-selection, engagement, early marital adjustment, communication, money, the working-wife, sex, and in-law problems.

Not open to first semester freshmen.

65.247-248 Sociology of the Afro-American (3, 3)

Examination of racism in Europe. Process of Afro-American's assimilation into U.S. culture. Negro institutions, business, leadership, education, literature, music. Migration, poverty, discrimination. The demand for equality.

65.340 The Family (3)

Varying forms and functions of family organization in different societies. Evolution of American family patterns. Family relations and personality formation. Contemporary social changes influencing family life.

65.345 American Society (3)

An analysis of contemporary American social institutions. The American social system in historical perspective, value systems, ethnic composition, formal and informal structures.

65.346 Comparative Social Systems (3)

A comparative analysis of contemporary societies, social institutions, value systems, formal and informal organization, integration and cohesiveness, relationships with other societies.

65.347 Race Relations (3)

A sociological examination of relationship between and within racial groups; an analysis of the social causes of prejudice and discrimination.

65.348 The Position of Women in the Social Order (3)

Location and description of women in the population. Nature and extent of prejudice and discrimination against women. Impact and significance of female equality upon the social order.

65.352 Human Ecology (3)

Relation of environment to distribution of population and to social structure and culture.

65.360 Social Change (3)

A sociological analysis of the causes, processes, and consequences of social change. A critical examination of theories of social change in the context of comparative analyses.

65.361 Social Disorganization (3)

Analysis of social problems created by technical and cultural change. Social background of personal maladjustment.

* 65.200 is a general prerequisite to all 300- and 400-level sociology courses.

- 65.365 Introduction to Social Work (3)**
Development of social welfare philosophy and practices. The areas of social work, group work, and community organization for public welfare. Community resources. Visits to selected agencies.
- 65.392 Social Interaction (3)**
An introduction to the sociological perspective of the interrelationship between individual and group. Socialization roles in small and complex organizations, mass communication and social movements.
- 65.410 Sociological Theory (3)**
Historical background of the theories, concepts, and methods of sociology; emergence and characteristics of the most significant sociological systems.
- 65.416 Introduction to Criminology (3)**
The nature, extent and social cause of delinquency and crime. The criminal law, the police and the administration of justice. The treatment of the offender.
- 65.420 Introduction to Social Research I (3)**
Introduction to the nature, methods, principles, and techniques of scientific social research. Critical review of types of investigations, with accent on field research.
Prerequisite: 69.202.
- 65.421 Introduction to Social Research II (3)**
A continuation of Introduction to Social Research I.
Prerequisite: 65.420.
- 65.445 Contemporary Communities (3)**
Analysis and comparison of the social and political structures and ideologies of contemporary communities of the world, stressing American community types. Approaches to community research.
- 65.450 Population (3)**
Survey of world population trends. Introduction to methods of analysis. Determinants and consequences of variations in fertility, mortality, and migration.

ADVANCED COURSES

(500-level courses are open to (1) graduate students, (2) undergraduate students with 12 hours of sociology, and (3) other undergraduates with permission of instructor; 600- and 700-level courses are open only to graduate students.)
Prerequisites may be required for some courses.

SOCIOLOGICAL THEORY

- 65.510 Concepts of Sociology (3)**
Systematic survey, critical analysis of sociological concepts. Emphasis on theoretical systems.
- 65.515 Law and the Social Order (3)**
Functions of law in society; social origins and development of political authority around human rights. The changing role of law in the modern democratic state.
- 65.610 History of Sociological Theory I (3)**
Comparative study of major schools of sociological theory in France, Great Britain, the United States.
Prerequisite: Permission of the instructor.

65.611 History of Sociological Theory II (3)

Comparative study of major schools of sociological theory in Germany, Austria, Italy.

Prerequisite: Permission of the instructor.

65.711 Seminar in Sociological Theory (3)

Intensive study of selected area or school of sociological thought. Emphasis on research in source materials.

Prerequisite: Permission of the instructor.

SOCIAL RESEARCH

65.511 Theory of Social Research (3)

Critical analysis of the logical and methodological problems of social investigation. The theoretical orientation of logically distinct approaches to sociological research.

65.512 Quantitative Methods in Sociology (3)

Elements of matrix algebra and their application to Sociology and Social Statistics. Latent structure analysis in Sociology.

Prerequisites: 41.110, 69.202.

65.514 Historical Sociology (3)

Employment of sociological concepts in the study of historical processes. Principles and techniques for the analysis of documents and their relation to sociological research.

Prerequisite: Permission of the instructor.

65.612 Social Research Methods I (3)

Research procedures in sociology with emphasis on survey design, collection of quantitative data.

Prerequisite: 69.202.

65.613 Social Research Methods II (3)

Research procedures in sociology with emphasis on analysis of quantitative data.

Prerequisite: 65.612.

65.615 Opinion Measurement and Research (3)

Examination of various attempts to measure attitudes and opinions. Emphasis on the evaluation of alternate research methodologies.

Prerequisite: 65.612.

65.691 In-Service Training Project (3-6)

Research project for qualified students working in government or private organization in areas related to their degree program. Project under supervision of faculty and organization concerned.

Prerequisite: Permission of Department Chairman.

65.712 Seminar in Social Research (3)

Investigation of recently developed techniques in various areas of social science and their application to Sociology. May be repeated for credit.

Prerequisite: Permission of the instructor.

SOCIAL ORGANIZATION

65.540 Social Organization (3)

The social structure emphasizing the nature, functioning, integration of social institutions; types of organizations: family, clique, voluntary association, work, bureaucracy, community; social differentiation and stratification.

65.542 Sociology of Political Action (3)

Critical evaluation of recent theories of political sociology. Motivation in

political behavior. Application of concepts of group participation from functional sociology and psychology.

Prerequisite: 6 hours of government.

65.543 Sociology of the Workplace (3)

The sociology of work relationships, using the workplace as the unit of analysis. Emphasis on industrialization and bureaucratization.

65.544 The Sociology of Occupations (3)

The sociology of work relationships; using the occupation as the unit of analysis. Emphasis on the process of professionalization, and on professional roles in complex organization.

65.547 Social Stratification (3)

Class, status and power relations in society. Caste, estate, social class, social mobility. Theories and empirical research findings of current importance.

65.548 Race and Culture Contact (3)

Analysis of problems and processes deriving from contacts of peoples different as to race and/or culture. Prejudice, discrimination, conflict, accommodation, acculturation, amalgamation, assimilation.

65.549 Sociology of Science (3)

Science as a major institution in modern society; historical development, social organization, inter-relationship; social, cultural determinants of scientific activities; contributions from sociology of knowledge, invention, technology.

65.562 Sociology of Health (3)

Health problems in their social and economic aspects. Sociological methodologies and findings in the area of health and medical care.

65.567 Urban Redevelopment (3)

Theory and practice of urban redevelopment. Causal factors of city blight and slums; efforts of public, private agencies. Planning, financial, social legislative aspects of urban redevelopment.

65.580 Sociology of Religion (3)

Concepts, methods and techniques in the sociological analysis of religion. Historical, comparative and functional approaches to religion. Emphasis on European and American Christianity.

65.714 Seminar in Social Organization (3)

Consideration of theoretical and methodological problems in the field and preparation of related research reports. May be repeated for credit.

Prerequisite: Permission of the instructor.

POPULATION AND ECOLOGY

65.550 The City (3)

Patterns and process of urban society. The ecological and social organization of the modern city. Urban problems and trends. Emphasis on methods of research in the field.

Prerequisites: 65.352, 69.202.

65.551 Analysis of Population Trends (3)

Measurement and analysis in demography with substantive treatment of population trends. Stable population theory; factors affecting fertility and mortality; population projection, population distribution.

Prerequisites: 69.202, 65.450.

65.554 Morbidity and Mortality Analysis (3)

Various concepts of a population; increment and decrement functions, meas-

urement of morbidity, life table functions, survivorship function as research tool, biological aspects of life table.

Prerequisite: 65.551.

65.715 Seminar in Population Studies (3)

Investigations of selected problems, with related discussion of theory and methodology.

Prerequisite: Permission of the instructor.

SOCIAL PSYCHOLOGY

65.570 Social Psychology of Intergroup Tensions (3)

The social-psychological nature of intergroup prejudice, and its relation to other aspects of personality and social behavior. Recent research on the determinants of intergroup attitudes. Techniques for the reduction of intergroup tension.

65.591 Person and Society (3)

Ways in which the individual becomes a person with tendencies to play various roles in different situations. Social control through interpersonal relations and self-conception.

65.592 Social Aspects of Mass Communication (3)

Communication of ideas in modern society. Special attention to current empirical research on mass media in relation to sociological theory.

65.593 Collective Behavior (3)

Analysis of crowd, mass, public behavior. Relationship to social movements of modern times. Role of leadership in various types of collective behavior. Factors, processes in emergence of social order.

65.716 Seminar in Social Psychology (3)

Consideration of sociological aspects of recent theoretical and methodological advances in the field and preparation of related research reports. May be repeated for credit.

Prerequisite: Permission of the instructor.

SOCIAL CHANGE AND DISORGANIZATION

65.560 Social Conflict (3)

A sociological analysis of the history, typology, structure, function and nature of social conflict.

65.561 Public Welfare: Principles and Problems (3)

Principles underlying public welfare programs and major problems in the field. Organizational structure, methods of operation of federal, state, local agencies administering programs.

65.563 Causes of Crime (3)

Nature, causal factors in delinquent behavior. Natural history of delinquent careers. Programs and policies for controlling problems of delinquency and crime in urban areas.

65.566 Aging in Modern Life (3)

Social, economic, health problems related to the aging process. Changing social roles, attitudes. Provisions for the economic, health, psychological, social needs of the older person.

65.568 Treatment of the Offender I (3)

A critical examination of the theory, practices and problems in the fields of probation and parole of adult offenders.

Prerequisite: 65.563.

- 65.569 Treatment of the Offender II (3)**
A critical examination of the theory, practices and problems in the institutional treatment of adult offenders.
Prerequisite: 65.563.
- 65.713 Seminar in Family and Marriage Relations (3)**
Intensive study of selected problems in the area of family and marriage relations. Student reports and critical appraisals by the seminar.
Prerequisite: Permission of the instructor.
- 65.717 Seminar in Social Change and Disorganization (3)**
Consideration of recent developments in the methodological and theoretical approaches to selected problems in the area of social change and disorganization, and preparation of related research reports. May be repeated for credit.
Prerequisite: Permission of the instructor.
- 65.797 Master's Thesis Seminar (3-6)**
- 65.799 Doctoral Dissertation Seminar (3-6)**

Speech Arts

Professors:

F. COWLES STRICKLAND

J. H. YOCUM

Associate Professors:

J. A. HENDRIX

JEROME B. POLISKY (*Chairman*)*Assistant Professors:*

KENNETH BAKER

BORIS BARANOVIC

Professorial Lecturers:

LOUIS FRANA

*Lecturer:*SARA BEST

UNDERGRADUATE DEGREE

Bachelor of Arts

University Requirements	Composition and Reading	(6 hours)
	Physical Education	(4 units—non-credit)
	Humanities are normally satisfied by major and related requirements.	
	Consult department.	(12 hours)
	Science and Mathematics	(12 hours)
	Social Science	(12 hours)

Language Requirement One language is required through the intermediate level. The number of hours required varies according to the student's prior preparation in language and the courses selected at the University. Students may elect either track of the intermediate level options.

Graduate Record Examination Required of all seniors.

Departmental	THEATRE EMPHASIS (33 hours)
Requirements	67.122 Introduction to Theatre (3)
	67.150 Argumentation (3)
	67.170 Oral Interpretation (3)
	67.123 Stagecraft (3)
	67.322 Stage Movement (3)

67.323 Theory of Acting (3)
67.532 Directing (3)
67.550 History of Theatre I (3)
67.551 History of Theatre II (3)
Departmental Electives (6)

PUBLIC ADDRESS EMPHASIS (30 hours)

67.122 Introduction of Theatre (3)
67.150 Argumentation (3)
67.170 Oral Interpretation (3)
67.350 Introduction to Rhetoric *or* (3)
67.351 Introduction to Public Address (3)
67.352 Public Address in Contemporary Society (3)
Departmental Electives (12)

RELATED FIELD

All Speech Arts majors must complete a minimum of 15 hours outside the department in a related field of study chosen in consultation with departmental advisers.

THEATRE AND FORENSIC PROGRAMS

The Department of Speech Arts expects all majors to actively participate in the theatre and/or forensic programs of the department.

Electives All majors are required to elect courses as needed to complete the minimum 120 hours plus non-credit physical education.

GRADUATE DEGREE

Master of Arts

AREAS OF CONCENTRATION: Graduate students may concentrate in theatre, rhetoric and public address or speech education.

Course Requirements Minimum of 30 hours of approved graduate work including 67.602 Research Seminar in Speech Arts (3 hours) and 67.797 Master's Thesis Seminar (3-6 hours), or 67.798 Non-Thesis Option Seminar (6 hours)

Comprehensive Examinations Two examinations are required including one exam in a core field and one exam in a specialized field. Core field exams must be taken in the Department of Speech Arts. Specialized field exams may be in the Department of Speech Arts or in an appropriate related field of another department.

CORE FIELDS:

67.001 Rhetoric and Public Address
67.002 Theatre
67.010 Speech Pedagogy

SPECIALIZED FIELDS:

67.011 Rhetoric
67.012 Public Address
67.020 Theatre History

Thesis and Non-Thesis Option All Candidates for the M.A. degree in Speech Arts are required to complete a thesis or non-thesis option project. The student who elects the non-thesis option may 1) complete two research papers or 2) complete one research paper and a "creative" or "production" study in theatre. All production studies must be accompanied by a suitable written defense of the project.

Graduate students in the public address area are expected to write theses.

Graduate Awards

The department of Speech Arts awards teaching assistantships to qualified graduate students pursuing the M.A. degree. A playwriting fellowship is also awarded by the department to a qualified graduate student. Interested students should contact the chairman of the department.

UNDERGRADUATE COURSES

67.110 Public Speaking (3)

The principles of public speaking, sound standards for evaluating speeches, and practice in the preparation and presentation of several types of public addresses.

67.116-119 Practicum (1)

A laboratory practicum in the several areas of the Department of Speech Arts: Rhetoric, Public Address, and Theatre.

Prerequisite: Consent of the Department Chairman.

67.122 Introduction to Theatre (3)

Survey of the various phases of contemporary theatre in relationship to its historical development, dramatic literature, and aesthetics.

67.123 Stagecraft (3)

Theory and practice of construction and rigging methods and materials for the technical aspects of productions with emphasis on application through laboratory experience.

67.150 Argumentation (3)

The use of reason, the nature and forms of argument, the structure of argumentative discourse, and the relationship of delivery to effective argument.

67.151 Persuasion and Discussion (3)

The nature and role of communication in group discussion and group problem solving, plus the theories and techniques of persuasion.

67.170 Oral Interpretation (3)

Analysis, interpretation, and practice in expressive reading of literature to develop ability in sharing literature with an audience.

67.320 Scene Design I (3)

Introduction to the fundamentals of perspective drawing and the graphic presentation of floor plans and elevations for design in the performing arts. Laboratory.

Prerequisite: 67.123.

- 67.321 Stage Lighting (3)**
The study of lighting instruments, control boards, and the use of lighting as an integral part of the play's design for the performing arts. Laboratory.
Prerequisite: 67.123.
- 67.322 Stage Movement (3)**
A concentration on the analysis and understanding of the body movement as the actor's visual means of communication with an audience.
- 67.323 Theory of Acting (3)**
The study and analysis of the basic principles and theories, and philosophical origins of the dramatic performance as expressed through any of the contemporary entertainment media.
Prerequisite: 67.322.
- 67.324 Technique of Acting (3)**
The analysis of the actor's problem through a detailed exploration of the craft and techniques of the actor related to the performing arts.
Prerequisites: 67.322, 67.323.
- 67.326 Introduction to Playwriting (3)**
Special techniques required for dramatic scripts with emphasis on plotting, characterization, dialogue, pacing, mood.
- 67.350 Introduction to Rhetoric (3)**
Survey of the nature, scope and significance of the tradition of Rhetoric as expressed in works of major theorists from antiquity to present. (Non-performance course.)
- 67.351 Introduction to Public Address (3)**
Critical examination of the ideology, strategy, and techniques of public speakers who have influenced the thoughts and directions of modern democratic and totalitarian societies. (Non-performance course.)
- 67.352 Public Address in Contemporary Society (3)**
Analyses of the character and role of speeches addressed to selected 20th century issues.

ADVANCED COURSES

(500-level courses are open to graduate students and advanced undergraduates; 600-700 level courses are open only to graduate students.)

- 67.510 Advanced Public Speaking (3)**
The theory and practice of speech composition with emphasis on style and content.
Prerequisite: 67.110 or permission.
- 67.520 Advanced Scene Design (3)**
The fundamentals of design for the performing arts, including preparation of sketches and drawings based on the principal styles and periods in theatre.
Prerequisite: 67.320 or permission.
- 67.521 Problems in Scene Design (3)**
Special design problems designed to meet the individual student's interests in design for drama, ballet and opera.
Prerequisite: 67.520.
- 67.524 Costume Design I (3)**
The history of theatrical costumes from antiquity to late 16th century.
- 67.525 Costume Design II (3)**
Covers costuming from late 16th century to 1914.

- 67.532 Directing (3)**
Direction in the theatre, including comparison with and contrast to the other dramatic media.
Prerequisite 67.323.
- 67.542 Advanced Directing (3)**
A seminar laboratory course in problems of directing plays for the theatre.
Prerequisite: 67.532 Directing, and consent of the instructor.
- 67.550 History of Theatre I (3)**
The development of the stage and the drama from Greek through Renaissance.
Prerequisite: Advanced undergraduate standing.
- 67.551 History of Theatre II (3)**
The development of the stage and the drama from the 17th century to 1914.
Prerequisite: 67.550 desirable.
- 67.556 History of the American Theatre (3)**
The theatre in America as a cultural force from the colonist period to 1920.
Prerequisite: Advanced undergraduate standing.
- 67.560 Dramatic Theory and Criticism (3)**
An investigation of historical criticism as related to modern dramatic theory and criticism. Weekly written criticisms of dramatic productions will be required.
Prerequisites: 67.550-551, plus 12 additional hours of approved drama courses.
- 67.561 Advanced Playwriting (3)**
Practical experience in writing the full-length play. May be repeated.
Prerequisite: Permission.
- 67.570 Advanced Oral Interpretation (3)**
The preparation of more complex literary forms for platform presentation.
Prerequisite: 67.170 plus 67.323 or consent of the instructor.
- 67.579 Seminar in Methods of Teaching Speech (3)**
Designed to acquaint the prospective speech teacher with the philosophy, theory, practice and methods of speech education.
Prerequisites: 18 hours of Speech Arts.
- 67.594 Seminar in Rhetoric (3)**
Study of the works of the principal theorists in the major periods in the development of the body of rhetorical theory. The periods and works studied will be announced from semester to semester as the course is offered. May be repeated for credit.
Prerequisite: Graduate standing or permission.
- 67.595 Seminar in Public Address (3)**
The study of the public address of a specific period or problem area through critical study of the works and methods of its principal speakers. Topics will be announced from semester to semester. May be repeated for credit.
- 67.596 Seminar in Theatre (3)**
The study of specific problems in items of theatrical presentation of theatre history. Topics will be announced the semester the course is offered. May be repeated for credit.
- 67.602 Research Seminar in Speech Arts (3)**
Required seminar of all graduate students in the Department of Speech Arts. Research problems will vary from semester to semester.
- 67.721 Problems in Technical Theatre (3)**
An intensive survey of all phases of technical theatre for the graduate student.

67.797 Master's Thesis Seminar (3-6)

67.798 Non-Thesis Option Seminar (3-6)

See also: *Department of English* for courses applicable to major in Speech Arts. The following such courses may be taken for credits in Speech Arts:

- 23.550 Classical Drama (3)
- 23.524 Shakespeare I (3)
- 23.525 Shakespeare II (3)
- 23.522 English Drama: 10th Century to 1642 (3)
- 23.529 Restoration and 18th Century Drama (3)
- 23.538 British Drama: 19th and 20th Centuries (3)
- 23.549 Modern American Drama (3)
- 23.557 Modern European Drama (3)

The following courses from the *Department of Communication* may be taken for credits in Speech Arts:

- 17.558 History of Motion Pictures (3)
- 17.583 Film Production (3)

ADMINISTRATION

<i>Dean of the College</i>	W. DONALD BOWLES
<i>Associate Dean of the College</i>	JOHN C. SCOTT
<i>Associate Dean of the College</i>	RUTH E. MCFEETER
<i>Graduate Counselor</i>	LAURA M. ROWE
<i>Associate Program Counselor</i>	FRANCES W. MCDUGAL
<i>Associate Program Counselor</i>	RUTH E. EARLY

Educational Policy Committee

W. DONALD BOWLES	JOHN C. SCOTT
EDITH GROTEBERG	S. FREDERICK SEYMOUR
PIERRE HAN	ROGER T. SYMONDS
VADIM MEDISH	GORDON H. SMITH
LLOYD ULTAN	

Teacher Education Committee

JOHN H. SMITH (1968)	DOROTHY D. GONDOS (1968)
THOMAS H. HILL (1968)	JOSEPHINE HUBBELL (1970)
VADIM MEDISH (1969)	STERLING D. WHITLEY (CHAIRMAN)

Honors Board

PIERRE HAN (CAS-Hum.)	HERSCHEL CUTLER (SBA)
EDITH H. GROTEBERG (CAS-Edu.)	MARIAN D. IRISH (SIS)
ESTHER W. BALLOU (CAS-F&CA)	JOSEPHINE G. GIMBLE (SON)
DONALD H. FLANDERS (CAS-Nat.Sci.)	A. LEE FRITSCHER (SGPA)
D. J. BRANDENBURG (CAS-Soc.Sci.)	

Undergraduate Studies Committee

STERLING D. WHITLEY (CAS-Edu.)	FREDERICK H. GLADE, JR. (SBA)
WILLIAM M. WIEBENGA (CAS-Hum.)	RICHARD G. SMOLKA (SGPA)
JACK H. YOCUM (CAS-F&CA)	WHITTLE JOHNSTON (SIS)
LON E. HELGEN (CAS-Nat.Sci.)	L. FRANCES GORDON (SON)
B. BLACKINGTON (CAS-Soc.Sci.)	

FACULTY

- Emeriti** SARAH M. BAKER (1945), Pennsylvania Academy of Fine Arts; Académie Montparnasse, Paris; Phillips Memorial Gallery. *Emeritus Professor of Art.*
- SAMUEL ENGLE BURR, JR. (1947), Litt. B., Rutgers; M.A. Wisconsin; M.A., Columbia; Ed.D., Cincinnati. *Emeritus Professor of Education.*
- ERNEST CORRELL (1929), Dr. oec. publ., Munich. *Emeritus Professor of Economic History.*
- HAZEL H. FEAGANS (1929), B.A., B.E., George Washington; M.A., American. *Emeritus Professor of English.*
- JOHN G. FRANK (1948), Ph.D., Munich; Ph.D., Michigan. *Emeritus Professor of Languages and Linguistics.*
- JOHN W. FREY (1957), B.S., Chicago; Ph.D., Wisconsin. *Emeritus Professor of Earth Sciences.*
- RALPH H. GABRIEL (1958), B.A., M.A., Ph.D., Yale; M.A., Cambridge; Litt.D., Bucknell, Williams; D.H.L., Colgate. *Emeritus University Professor of American Studies.*
- FRANCES HOLLIDAY (1959), B.S., Northwest Missouri State; M.A., Missouri; Ed.D., George Washington. *Emeritus Professor of Education.*
- FRANK LORIMER (1938), B.A., Yale; M.A., Chicago; B.D., Union Theological Seminary; Ph.D., Columbia. *Emeritus Professor of Sociology.*
- FRITZ KARL MANN (1936), Dr. Jur., Goettigen; Ph.D., Berlin. *Emeritus Professor of Economics.*
- SIMON NAIDEL (1948), B.S., College of the City of New York; M.A., Columbia; Ph.D., American. *Emeritus Professor of Economics.*
- RUBERTA M. OLDS (1930), Ph.B., Chicago; M.A., Columbia. *Emeritus Associate Professor of Languages and Linguistics.*
- ERNEST POSNER (1939), Ph.D., Berlin. *Emeritus Professor of History.*
- BANCROFT W. SITTERLY (1947), B.A., M.A., Ph.D., Princeton. *Emeritus Professor of Physics.*
- CHARLES K. TRUEBLOOD (1949), B.S., Earlham College; B.S., Haverford College; M.A., Ph.D., Harvard. *Emeritus Professor of Psychology.*
- CHARLES W. VAN WAY, JR. (1955), B.S., U.S. Military Academy; M.B.A., American. *Emeritus Associate Professor of Education.*
- Full-Time** RUDOLPH VON ABELE (1947), B.A., Ph.D., Columbia. *Professor of English.*
- RAYMOND W. AIKEN (1957), B.S., M.A., Pennsylvania. *Assistant Professor of English.*
- MARY H. ALDRIDGE (1955), B.S., Georgia; M.A., Duke; Ph.D., Georgetown. *Professor of Chemistry.*
- RICHARD R. ANDERSON (1966), A.A., Clark Junior College; B.S., Lewis and Clark; M.S., Ph.D., Maryland. *Assistant Professor of Biology.*
- CARL G. ANTHON (1961), B.A., Chicago; M.A., Ph.D., Harvard. *Professor of History.*
- W. MICHAEL BAILEY (1966), B.A., North Texas State. *Instructor of Economics.*
- KENNETH BAKER (1966), B.A., M.A., Kansas. *Assistant Professor of Speech Arts.*
- ESTHER W. BALLOU (1955), B.A., Bennington; M.A., Mills College; Graduate Degree, Julliard. *Assistant Professor of Music.*
- BORIS I. BARANOVIC (1966), B.A. in Dramatics, Amherst. *Assistant Professor of Speech Arts.*

- NANCY BARRETT (1966), Goucher; M.A., Ph.D., Harvard. *Assistant Professor of Economics.*
- PATRICIA BARTLETT (1968), B.A., Wheaton College; M.S., American. *Instructor of Biology.*
- MERRITT C. BATCHELDER (1935), A.B., Hillsdale; M.A., Columbia; Ph.D., Iowa. *Professor of English.*
- ARTHUR P. BEAN, JR. (1936), B.A., M.A., Virginia. *Assistant Professor of English.*
- ROBERT LEE BEISNER (1965), M.S., Ph.D., Chicago. *Associate Professor of History.* On leave 1968-69.
- JOANNE M. BENTON (1964), B.S., Maryland. *Instructor of Health, Physical Education, and Recreation.*
- BARBETTE BLACKINGTON (1967). B.A., Colby College; M.A., Howard. *Assistant Professor of Sociology.*
- ROBERT O. BLANCHARD (1965), B.S., M.S., Northwestern; Ph.D., Syracuse. *Associate Professor of Communication.*
- EDWARD L. BLISS, JR. (1967), B.A., Yale. *Associate Professor of Communication.*
- JOHN JAMES BODINE (1968), B.A., University of Oklahoma; M.A., Ph.D., Tulane. *Associate Professor of Anthropology.*
- VERA Z. BORKOVEC (1966), M.A., Hollins; M.A., American. *Assistant Professor of Languages and Linguistics.*
- W. DONALD BOWLES (1957), B.A., University of Washington; M.A., Ph.D., Columbia. *Professor of Economics.*
- LOTHAR BRABANSKI (1957), Master. Academy of Fine Arts, Berlin. *Associate Professor of Art.*
- DAVID J. BRANDENBURG (1948), B.S., Bowdoin; A.M., Ph.D., Columbia. *Professor of History.*
- ANN BAKER BRAUN (1962), B.A., M.A., Boston; Ph.D., New Hampshire. *Assistant Professor of Chemistry.*
- EDWARD J. BREYERE (1961), B.S., M.S., Ph.D., Maryland. *Professor of Biology.*
- ROGER H. BROWN (1965), A.B., A.M., Ph.D., Harvard. *Associate Professor of History.*
- SUMNER O. BURHOE (1956), B.S., Massachusetts; M.S., Kansas State; Ph.D., Harvard. *Professor of Biology.*
- DINSHAW BURJORJEE (1966), A.B., Catholic; M.A., Georgetown. *Instructor of English.*
- EDWARD I. BURKART (1960), B.S., M.S., Georgetown; Ph.D., University of Pennsylvania. *Assistant Professor of Languages and Linguistics.*
- EDWARD T. BUTLER, JR. (1966), B.S., American; M.A., American. *Assistant Professor of Earth Sciences.*
- EARL CALLEN (1968), B.A. M.A., University of Pennsylvania; Ph.D., M.I.T. *Professor of Physics.*
- MARIE A. CHARBONNEAUX (1960), Baccalaureat, Licence en-Droit, University of Paris; Etudes Pratiques d'Anglais, Sorbonne. *Assistant Professor of Languages and Linguistics.*
- BENSON T. CHERTOK (1966), B.S., M.S., Massachusetts Institute of Technology; Ph.D., Boston. *Assistant Professor of Physics.*
- ROBERT J. CHINNIS (1964), B.S., East Carolina; M.Ed., North Carolina; Ed.D., Maryland. *Associate Professor of Education.*
- CHARLES M. CLARK (1941), A.B., M.A., Ph.D., Cornell. *Professor of English.* On leave 1968-69.

CHARLES P. CORN (1964), A.B., Washington and Lee; M.A., George Washington. *Instructor of English*.

BILLY G. COWARD (1964), B.S., B.A., American. *Instructor of Health, Physical Education and Recreation*.

HORACE D. CRAWFORD (1946), A.B., Hillsdale. *Professor of Communication*.

JOHN D. CRONIN, B.A., Kenyon College; M.A., Chicago; M.S.L., Georgetown; Ph.D., Bonn. *Assistant Professor of Languages and Linguistics*

DAVID CROSBY (1966), B.A., American; M.A., Ph.D., Arizona. *Assistant Professor of Mathematics*.

CHARLES CROWDER (1967), B.M., Lawrence College; M.A., Columbia. *Assistant Professor of Music*.

PAUL R. CURTIS (1960), B.A., College of Wooster; M.S., Ph.D., Ohio State. *Associate Professor of Biology*.

WEISLAW CZYZ (1967), Ph.D. Jagellonian. *Visiting Professor of Physics*.

ROBERT A. D'ARISTA (1961), New York University; Columbia; Academie Grand Chaumiere, Paris. *Associate Professor of Art*.

CHARLES M. DAVIS (1962), A.B., M.S., Ph.D., Catholic. *Associate Professor of Physics*.

HAROLD E. DAVIS (1947), B.A., Hiram; M.A., Chicago; Ph.D., Western Reserve. *University Professor of Latin American Studies*. (SIS).

DONALD DERBY (1947), B.A., Bowdoin; M.A., Ph.D., Harvard. *Professor of History*.

JOHN W. DEVOR (1956), A.B., M.A., Kansas; Ph.D., Chicago. *Professor of Education*.

GLORIA W. DE WIT (1965), B.S., M.S., Ph.D., Illinois. *Assistant Professor of Physics*.

THOMAS V. DI BACCO (1965), B.A., Rollins; M.A., Ph.D., American. *Assistant Professor of History*.

ERNEST DIBBLE (1965), B.A., Ph.D., American. *Associate Professor of History*.

HAROLD A. DUFEE (1955), Ph.B., Vermont; B.D., Yale; Ph.D., Columbia. *William Frazer McDowell Professor of Philosophy*. On leave, Fall 1968.

JOHN B. EDGE, (1964), B.A., Vanderbilt; M.A., George Peabody. *Assistant Professor of Education*.

IRENE W. ENO (1959), Cert., Sacker's School of Design. *Associate Professor of Art*. On leave, Spring 1969.

JOHN J. FINAN (1961), A.B., A.M., Washington University; Ph.D., Harvard. *Associate Professor of History & SIS*.

DONALD H. FLANDERS (1963), B.A., Reed; M.A., Maryland. *Assistant Professor of Mathematics and Statistics*.

JOSEPH M. FOLEY (1968), B.S., Antioch; M.S., University of Iowa. *Instructor of Communication*.

ROBERT T. FOLEY (1964), B.S., Massachusetts; M.S., Lafayette; Ph.D., Texas. *Professor of Chemistry*.

JAMES D. FRADY, JR. (1964), A.B., M.Ed., North Carolina. *Assistant Professor of Health, Physical Education, and Recreation*.

ROBERT H. FRAILEY (1949), B.S., M.A., American. *Associate Professor of Health, Physical Education and Recreation*.

MARY D. GARRARD (1964), A.B., Newcomb; A.M., Radcliffe. *Assistant Professor of Art*.

ROBERT F. GATES (1946), Detroit School of Arts and Crafts; Art Students League of New York; Phillips Gallery; Colorado Springs Fine Arts Center. *Professor of Art*.

DANIEL GEISER (1966), A.B., Juniata; M.A., Ohio State; Ed.D., Columbia. *Professor of Health, Physical Education and Recreation.*

JESSICA W. GOLDEN (1966), B.A., Long Island University; M.A., Columbia. *Assistant Professor in Languages and Linguistics.*

GILLIAN GOLLIN (1967), B.S., University of London; M.A., Ph.D., Columbia. *Associate Professor of Sociology.*

DOROTHY D. GONDOS (1947), B.A., Swarthmore; M.A., Ph.D., Pennsylvania. *Professor of History.*

MARIANO E. GOWLAND (1964), Bachillerato, Buenos Aires. *Instructor in Languages and Linguistics.*

LEROY S. GRAHAM (1960), B.A., American; B.D., Drew Theological Seminary; Ph.D., Drew University. *Assistant Professor of Sociology.*

MARY W. GRAY (1968), B.A., Hastings College; M.A., Ph.D., University of Kansas. *Associate Professor of Mathematics and Statistics.*

CHALMER A. GROSS (1959), B.S., M.S., Illinois; Ph.D., Chicago. *Professor of Education.*

EDITH H. GROTEBERG (1963), B.A., Northwestern; M.A., Chicago; Ph.D., Northwestern. *Professor of Education.*

MICHAEL GURALNICK (1967), B.A., University of Michigan; M.S., Ph.D., Lehigh. *Assistant Professor of Psychology.*

DORIS E. HADARY (1962), B.S., Illinois; M.S., Ph.D., Wisconsin. *Associate Professor of Chemistry.*

PIERRE HAN (1964), B.A., Catholic; M.A., Ph.D., Columbia. *Associate Professor of English.*

CHARLEY DEAN HARDWICK (1967), B.A., Southern Methodist; B.D., Drew Theological School; M.A., Ph.D., Yale. *Assistant Professor of Philosophy and Religion.*

GEORGE L. HARRIS (1965), B.A., Washington. *Associate Professor of Anthropology (SIS).*

MARK HARRISON (1960), B.S., Northeast Missouri State College; Ph.D., Catholic. *Professor of Physics.*

VIRGINIA E. HAWKE (1950), B.S., M.A., Ohio State. *Associate Professor of Health, Physical Education and Recreation.*

EVELYN SWARTHOUT HAYES (1951), B.M., Kansas; Tobias Matthay Piano School, London. *Associate Professor of Music.*

LON ENDRE HELGEN (1956), B.A., St. Olaf; M.S., Ph.D., Yale. *Assistant Professor of Chemistry.*

J. A. HENDRIX (1965), B.A., East Texas State; M.A., Oklahoma; Ph.D., Louisiana State. *Associate Professor of Speech Arts.*

HELENE MCKINSEY HERZBRUN (1957), B.A., Chicago. *Associate Professor of Art.* On leave 1968-69.

THOMAS H. HILL (1963), B.M., M.Mus., Boston. *Assistant Professor of Music.*

MARJORIE HIRANO (1967), B.E., Hawaii; M.S., Illinois Institute of Technology. *Assistant Professor of Art.*

BERNARD A. HODINKO (1967), B.S., California State College; M.A., West Virginia University; Ed.D., Pennsylvania State. *Associate Professor of Education.*

HEIMO E. HOFMEISTER (1968), Ph.D., University of Vienna. *Assistant Professor of Philosophy and Religion.*

ZUZEL C. HOLCOMB (1965), Doctor en Pedagogia, University of Havana. *Instructor in Languages and Linguistics.*

ROBERT F. HOLZ (1968), B.A., Queens College; M.S., Boston. *Assistant Professor of Sociology.*

MARY ANN G. HOOD (1957), B.A., M.A., Michigan State; M.A., American. *Assistant Professor of English.*

JOSEPHINE W. HUBBELL (1962), B.S., William and Mary; M.A., Iowa; Ph.D., New York University. *Associate Professor of Health, Physical Education, and Recreation.*

PRISCILLA ELLIS HUI (1966), B.A., Bradley University; M.A., Michigan. *Instructor of Economics.*

WARREN S. HUNSBERGER (1966), A.B., Yale College; Ph.D., Yale. *Professor of Economics.*

JACEK JARZYNSKI (1963), B.Sc., Ph.D., Imperial College, London. *Associate Professor of Physics.*

JEAN T. JOUGHIN (1959), A.B., A.M., Ph.D., Texas. *Professor of History.* On leave Spring 1969, Fall 1969.

HELMER G. JUNGHANS (1964), B.S., M.S., Kansas State. *Instructor of Mathematics and Statistics.*

PAMELA H. KACSER (1965), B.A., London; M.S., Cornell; Ph.D., London School of Economics. *Associate Professor of Economics.*

BARBARA H. KAPLAN (1968), B.A., Melbourne University. *Assistant Professor of Sociology.*

RICHARD B. KAY (1967), B.S., Drury College; M.S., Ph.D., University of Arkansas. *Assistant Professor of Physics.*

ANDREW S. KECK (1946), B.A., Williams College; M.A., M.F.A., Princeton. *Professor of Art History.*

FAYE L. KELLY (1962), B.A., M.A., Ph.D., Florida. *Associate Professor of English.*

EDWARD KESSLER (1967), B.A., University of Virginia; M.A., Ph.D., Rutgers. *Assistant Professor of English.*

FRANCES H. KING (1957), B.A., Western College for Women; M.A., Ohio State. *Assistant Professor of English.*

JOHN R. KIRKLAND (1968), B.A., University of Florida; M.A., Ph.D., University of North Carolina, Chapel Hill. *Assistant Professor of History.*

IRA N. KLEIN (1968), B.S., M.A., Columbia. *Instructor of History.*

MONIQUE S. KLEIN (1964), B.A., M.A., Strasbourg. *Assistant Professor of Languages and Linguistics.*

BASIL P. KORIN (1961), B.A., Connecticut; M.S., Stanford; Ph.D., George Washington. *Associate Professor of Mathematics and Statistics.*

RUTH LANDMAN (1965), B.A., Vassar; M.A., Ph.D., Yale. *Assistant Professor of Anthropology.* On leave 1968-69.

EDDIE D. LEACH (1965), B.A., M.A., Baylor; Ph.D., Texas A and M. *Assistant Professor of Biology.*

HARRY LEE (1963), California Institute of Fine Arts; Pennsylvania Academy of Fine Arts. *Associate Professor of Communication.*

PAUL D. LEEDY (1961), A.B., Dickinson College; M.A., Pennsylvania; Ph.D., New York University. *Professor of Education.*

ROBERT C. LESTER (1962), B.A., Montana State; B.D., M.A., Ph.D., Yale. *Associate Professor of Philosophy and Religion.*

JAN KEITH LUDWIG (1967), B.A., Gettysburg College. *Instructor of Philosophy.*

GORDON MACGRIGOR (1966), B.A., Yale; Ph.D., Harvard. *Professor of Anthropology.*

CLAIRE T. MACHLIN (1966), B.A., Hunter College; M.A., George Washington. *Instructor in Mathematics and Statistics.*

- NATHANIEL MACON (1967), B.A., M.A., Ph.D., North Carolina. *Professor of Mathematics.*
- GRACE S. MANCILL (1958) B.A., Cornell; M.A., American. *Assistant Professor of Languages and Linguistics.*
- ALAN MANDEL (1966), B.S., M.S., Juilliard; Diploma, Akademie Mozarteum, Salzburg; Diploma, Conservatorio-Monteverdi, Bolzano, Italy. *Assistant Professor of Music.*
- BARRY A. MARKS (1968), B.A., Dartmouth; M.A., Ph.D., University of Minnesota. *Professor of English.*
- VITO E. MASON (1966), B.S., New York University; M.S., Ithaca College. *Assistant Professor of Music.*
- EDMUND B. MCCUE (1964), A.B., Union; M.S., Michigan; Ph.D., Carnegie Institute of Technology. *Associate Professor of Mathematics and Statistics.*
- RUTH E. MCFEETER (1955), B.S., Beaver College; M.A., Columbia. *Associate Professor of Health, Physical Education, and Recreation.*
- JOHN C. MCHUGH (1966), B.S., University of Maryland. *Instructor of Health, Physical Education, and Recreation.*
- JAMES L. McLAIN (1934), B.A., George Washington; Cert., Peabody Conservatory of Music. *Professor of Music.*
- CHARLES C. McLAUGHLIN (1963), B.A., Yale; M.A., Ph.D., Harvard. *Associate Professor of History.*
- CHARLES W. MCNETT, JR. (1967), B.A., Tulane. *Associate Professor of Anthropology.*
- VADIM MEDISH (1963), B.A., Pennsylvania; M.A., Ph.D., American. *Associate Professor of Languages and Linguistics.*
- RUTH MEIXNER (1965), A.B., Upsala; M.A., Wisconsin; M.A., American. *Instructor in Art.*
- DENNIS D. MILLER (1962), B.S., Goshen College; M.Ed., Maryland; Ed.D., American. *Associate Professor of Education.*
- DONALD T. MOORE (1963), B.F.A., M.F.A., Ohio; M.A., American. *Assistant Professor of Communication.*
- HARVEY C. MOORE (1951), B.A., Delaware; Ph.D., New Mexico. *Professor of Anthropology.*
- EUGENE V. MORAN (1963), B.S., Millersville State College; M.A., George Washington; Ed.D., Maryland. *Assistant Professor of Education.*
- CYNTHIA T. MORRIS (1964), B.A., Vassar; M.Sc., London School of Economics; Ph.D., Yale. *Associate Professor of Economics.*
- RAYMOND N. MORRIS (1964), B. Soc. Sc., Birmingham; M. Soc. Sc., D. Phil., Oxford. *Professor of Sociology. On leave 1968-69.*
- ANNABELLE B. MOTZ (1966), M.A., Ph.D., Chicago. *Professor of Sociology.*
- HAMID MOWLANA (1968), B.A., University of Tehran; M.S., Ph.D., Northwestern. *Associate Professor of Communication.*
- HUGO J. MUELLER (1959), Ph.D., Hamburg. *Professor of Languages and Linguistics.*
- TERENCE R. MURPHY (1968), B.A., University of Chicago; M.A., Roosevelt University. *Instructor of History.*
- HENRY M. NOEL (1963), M.A., Pennsylvania; Dr. d'Univ., Universite de Montpellier. *Assistant Professor of Languages and Linguistics.*
- MATTHEW F. NORTON (1958), A.B., A.M., Ph.D., Columbia. *Professor of Earth Sciences.*
- FRED H. NOTHMAN (1960), B.S., College of the City of New York; Ph.D., Indiana. *Professor of Psychology.*

LAWRENCE G. NYCE, JR. (1963), B.S., Lock Haven State. *Instructor of Health, Physical Education, and Recreation.*

ELENI K. OKTAY (1961), B.A., George Washington; M.A., American. *Assistant Professor of Languages and Linguistics.*

WILLIAM B. OLDAKER (1960), A.B., West Virginia Wesleyan College; M.A., American. *Assistant Professor of Art.*

ALISON G. OLSON (1967), B.A., M.A., University of California at Berkeley; Ph.D., Oxford. *Associate Professor of History.*

DOROTHY A. OWENS (1962), B.A., Cornell; M.A., George Washington. *Assistant Professor of English.*

JANICE M. PAGE (1962), B.A., Utah; M.A., Pennsylvania. *Assistant Professor of Psychology.*

MARY M. PATTON (1943), B.A., Kalamazoo College; M.A., Columbia. *Associate Professor of English.*

LUCIANO PENA Y LILLO (1965), B.A., M.A., American. *Assistant Professor of Art.*

ROGER PENN (1959), B.A., M.A., American; Ph.D., Iowa. *Associate Professor of Communication.*

HUGO PINEDA (1959), B.A., George Washington; M.A., American. *Assistant Professor of Languages and Linguistics.*

JEROME B. POLISKY (1961), B.S., M.S., Ph.D., Wisconsin. *Associate Professor of Speech Arts.*

ROY J. POWER (1967), B.S., George Washington. *Instructor of Health, Physical Education, and Recreation.*

ISHWAR S. PRADIP (1968), B.Sc., Agra University; B.V.Sc. and A.H., Agra University; M.S., University of Florida; Ph.D., Louisiana State University. *Assistant Professor of Biology.*

NAIMA W. PREVOTS (1957), B.A., Brooklyn College; M.A., Wisconsin. *Assistant Professor of Health, Physical Education and Recreation.*

GRACE SHOVER QUINN (1956), B.A., B.S., M.A., Ph.D., Ohio State. *Professor of Mathematics and Statistics.* On leave 1968-69.

BARBARA RASKIN (1964), B.A., Minnesota; M.A., Chicago. *Instructor in English.*

BARBARA REIMANN (1967), B.S., Temple; M.A., Maryland. *Assistant Professor of Health, Physical Education and Recreation.*

FREDERICK A. H. RICE (1963), B.A., Dalhousie University; M.S., Dalhousie University Medical School; Ph.D., Ohio State. *Professor of Chemistry.*

JEANNE A. (MASENGILL) ROBERTS (1960), B.A., Agnes Scott College; M.A., Pennsylvania; Ph.D., Virginia. *Associate Professor of English.*

DAVID F. T. RODIER (1967), B.A., Drury College, Ph.D., Vanderbilt. *Assistant Professor of Philosophy.*

JOSEPH R. ROGERS, III (1965) B.S., Massachusetts. *Instructor of Health, Physical Education and Recreation.*

THEODORE R. ROSCHÉ (1966), B.A., Park College; B.D., Union Theological Seminary; Ph.D., Columbia. *Associate Professor of Religion.*

BARBARA J. ROSE (1965), A.B., M.A., American. *Instructor of Psychology.*

IVAN L. RUDNYTSKY (1967), B.A., University of Lvov; M.A., University of Berlin; Ph.D., Charles University of Prague. *Associate Professor of History.*

DAVID N. RUTH (1967), B.D., Union Theological Seminary and Columbia; Ph.D., Harvard. *Assistant Professor of Sociology.*

ROSEMARIE SAAL (1960), Abitur, Staatl. Gertraudenschule, Berlin; Ph.D., Freiburg. *Assistant Professor of Languages and Linguistics.*

- PILAR G. SAENZ (1968), B.A., Inst. Cardenal Cisneros, Madrid; M.A., Bryn Mawr; Ph.D., Maryland. *Assistant Professor of Languages and Linguistics.*
- MARTHA C. SAGER (1955), B.S., M.S., Maryland; Ph.D., Catholic. *Professor of Biology.*
- OSCAR SALAZAR (1962), B.A., Columbia Union; M.A., George Washington. *Assistant Professor of Languages and Linguistics.*
- STEVEN H. SCHOT (1957), B.S., American; M.A., Ph.D., Maryland. *Professor of Mathematics and Statistics.*
- LEO SCHUBERT (1951), B.S., College of the City of New York; M.S., New York University; Ph.D., Maryland; Sc.D., St. Augustine's College. *Professor of Chemistry.*
- GEORGE C. SCHUETZE, JR. (1963), B.M., Wisconsin; Ph.D., New York University. *Assistant Professor of Music.*
- JOHN CARVER SCOTT, JR. (1957), B.S., Springfield; M.A., Ph.D., Chicago. *Professor of Sociology.*
- ROMEO A. SEGNAI (1967), B.S., M.S., University of Turin; Ph.D., Carnegie Institute of Technology. *Assistant Professor of Physics.*
- JACK C. SEIGLE (1963), B.A., Michigan; M.A., Montana. *Assistant Professor of Communication.*
- S. FREDRICK SEYMOUR (1959), A.B., Union College; A.M., Stanford; Ph.D., Chicago. *Professor of Sociology.*
- ROGER T. SIMONDS (1958), B.A., M.A., Ph.D., Yale. *Associate Professor of Philosophy.*
- FALCONER SMITH (1964), B.S., M.S., Washington; Ph.D., Harvard. *Professor of Biology.*
- GORDON H. SMITH (1947), B.M., B.S.M., Wooster College; M.A., Mills College; Ph.D., Iowa. *Professor of Music.*
- JOHN A. SMITH (1968), B.A., Vanderbilt; B.D., Drew; M.A., Johns Hopkins. *Instructor of Education.*
- JOHN H. SMITH (1947), B.A., Iowa State Teachers College; M.B.A., Ph.D., Chicago. *Professor of Mathematics and Statistics.*
- WILLIAM E. STAHR (1953), B.A., M.A., Maryland; Ph.D., George Washington. *Assistant Professor of English.*
- BRUNO F. STEINBRUCKNER (1965), Ph.D., Innsbruck. *Assistant Professor of Languages and Linguistics.*
- ROBERT L. STRAUZ (1965), B.S., American; Ph.D., Maryland. *Assistant Professor of Biology.*
- F. COWLES STRICKLAND (1962), B.A., Wesleyan; M.A., Northwestern; Cert. School of Drama, Yale. *Professor of Speech Arts.* On leave, Fall 1968.
- BEN L. SUMMERTORD (1950), B.A., M.A., American; Ecole de Beaux-Arts, Paris. *Professor of Art.*
- FRANK M. TAMAGNA (1958), Ph.D., Yale; LL.D., Pavia. *Professor of Economics.*
- VITO TANZI (1967), B.A., M.A., George Washington; Ph.D., Harvard. *Associate Professor of Economics.*
- ELIZABETH N. TAYLOR (1967), B.S., Tufts; Sc.M., Brown. *Instructor of Mathematics and Statistics.*
- ANNETTE S. THOMPSON (1966), B.A., Connecticut College; M.A., Virginia; Ph.D., Virginia. *Assistant Professor of Psychology.*
- FRANK TURAJ (1965), B.A., M.A., Connecticut. *Assistant Professor of English.*
- THEODORE TURAK (1966), B.A., M.A., Western Reserve; Ph.D., Michigan. *Assistant Professor of Art.*

LLOYD ULTAN (1962), B.S., New York University; M.A., Columbia; Ph.D., Iowa. *Professor of Music*. On leave Spring 1969.

FRITS VAN BEEK (1968), B.A., Netherlands School of Economics. *Instructor of Economics*.

AUSTIN VAN DER SLICE (1946), B.A., M.A., Kansas; Ph.D., Pennsylvania. *Professor of Sociology*.

LUIS A. VEGUILLA-BERDECIA (1964), B.Sc., Brooklyn; M.A., Brandeis; Ph.D., Howard. *Associate Professor of Chemistry*.

A. L. VILAKAZI (1965), B.A., University of Natal; M.A., Hartford Foundation; Ph.D., University of Natal. *Professor of Anthropology and SIS*.

HERBERT R. VOSS (1967), B.S., Wisconsin State College; M.A., Minnesota. *Assistant Professor of Speech Arts*.

ELIZABETH VRENIOS (1967), B.M., University of the Pacific; M.M., Northwestern. *Instructor of Music*.

JOHN WAKEFIELD (1957), B.S., American. *Assistant Professor of Education*.

MONIQUE DE JONG WARD (1962), License, C.A.P.E.S., Strasbourg. *Assistant Professor of Languages and Linguistics*.

RICHARD V. WATERHOUSE (1961), B.A., M.A., Magdalen College, Oxford; Ph.D., Catholic. *Associate Professor of Physics*. On leave 1968-69.

PAUL F. WATERS (1965), B.S., University of Scranton; Ph.D., Rutgers. *Associate Professor of Chemistry*.

JAMES H. WEAVER (1963), B.S.B.A., Arkansas; Ph.D., Oklahoma. *Associate Professor of Economics*.

JOHN A. WHITE (1966), B.A., Oberlin; M.S., Ph.D., Yale. *Professor of Physics*.

RALPH WHITEFIELD (1961), B.A., Atlantic Christian College; M.A., North Carolina; Ed.D., Maryland. *Professor of Education*.

STERLING DEAN WHITLEY (1966), B.S., Tennessee Polytechnic; B.D., Vanderbilt; M.Ed., Ed.D., Auburn University. *Professor of Education*.

WILLIAM M. WIEBENGA (1964), A.B., Calvin; M.A., Yale; Ph.D., Yale. *Assistant Professor of Philosophy*.

CHARLES K. WILBER (1964), B.A., M.S., Portland; Ph.D., Maryland. *Associate Professor of Economics*.

HOWARD WILSON (1963), B.F.E., George Washington; M.A., Maryland. *Assistant Professor of Mathematics and Statistics*.

KATHRYN DAY WYATT (1945), B.A., Meredith College; M.A., Middlebury. *Assistant Professor of Languages and Linguistics*.

ZOE WYTHE (1948), License, University of Geneva; A.B., M.A., George Washington. *Assistant Professor of Languages and Linguistics*.

SHIRLEY E. (PEOUZ) YARNALL (1959), B.A., Wilson College. *Assistant Professor of English*.

JACK H. YOCUM (1954), B.A., Washburn Municipal University; M.A., Iowa; Ph.D., Wisconsin. *Professor of Speech Arts*.

LOUISE M. YOUNG (1954), B.A., Ohio Wesleyan; M.A., Ph.D., Pennsylvania. *Professor of English*.

FRANCIS E. ZAPATKA (1958), B.A., Fordham; M.A., Trinity. *Assistant Professor of English*.

Part-time STUART J. AARONSON (1967), B.A., Brown. *Lecturer in Sociology*.

MORRIS ABRAMS (1960), B.S., Maryland; LL.B., Washington College of Law. American. *Lecturer in Mathematics & Statistics*.

- BENJAMIN H. ALEXANDER (1961), B.A., Cincinnati; M.S., Bradley; Ph.D., Georgetown. *Adjunct Professor of Chemistry.*
- EDWARD L. ALLEN (1949), B.S., Columbia; M.A., Ph.D., American. *Adjunct Professor of Economics.*
- IRWIN ALTMAN (1957), B.A., New York University; M.A., Ph.D., University of Maryland. *Adjunct Professor of Psychology.*
- NICHOLAS C. ANAGNOS (1949), B.A., LL.B., Ph.D., University of Athens; M.A., Columbia. *Adjunct Professor of Economics.*
- EDWARD A. ANDERSON, JR. (1966), B.S., Lebanon Valley College; M.S., University of Notre Dame. *Lecturer in Mathematics & Statistics.*
- FRANK W. ANDERSON, JR. (1968), B.A., Birmingham-Southern; M.A., Ph.D., North Carolina. *Adjunct Professor of Communication.*
- ROBERT B. ANDERSON (1962), B.A., Yale; LL.B., Harvard. *Professorial Lecturer in English.*
- ARTHUR G. ASHBROOK (1963), B.S., Haverford; Ph.D., Massachusetts Institute of Technology. *Professorial Lecturer in Economics.*
- DANIEL BANES (1952), B.S., M.S., Chicago; Ph.D., Georgetown. *Adjunct Professor of Chemistry.*
- PAUL S. BAUER (1959), B.S., M.S., Harvard. *Adjunct Professor of Earth Sciences.*
- GENE BECHTEL (1966), B.S., MacPherson; J.D. Law School, George Washington. *Professorial Lecturer in Communication.*
- LAWRENCE BECKERMAN (1947), A.B., Brooklyn College; LL.B., George Washington. *Adjunct Professor of Communication.*
- FERNAND D. BEDARD (1962), B.S., Fordham; Ph.D., Johns Hopkins. *Adjunct Professor of Physics.*
- MARSHA BENNETT (1967), B.A., Michigan. *Lecturer in Sociology.*
- WILLIS BENNETT (1967). *Lecturer in Music.*
- WILMER F. BENNETT (1953), B.S., Wilson Teachers College; M.A., Columbia. *Adjunct Professor of Education.*
- WALTER A. BENSON (1967), B.S., Illinois; Ph.D., Colorado. *Professorial Lecturer in Chemistry.*
- NELLIE M. BERING (1962), B.S., William and Mary; M.T. (ASCP). *Professorial Lecturer in Biology.*
- SINA BERLINSKI (1965), State Teachers' License, State Conservatory Leipzig; License d'Enseignement, Ecole Normal de Musique, Paris. *Professorial Lecturer in Music.*
- JULIA BILLINGS (1966), B.A., Wilson College; M.A., Bryn Mawr. *Professorial Lecturer in Languages & Linguistics.*
- DONALD G. BISHOP (1967), Youngstown. *Lecturer in Communication.*
- WILLIAM W. BLAISDELL (1968), B.S., Columbia. *Professorial Lecturer in Health, Physical Education & Recreation.*
- ROBERT T. BOWER (1949), B.A., Columbia; Ph.D., Yale. *Adjunct Professor of Sociology.*
- DAN F. BRADLEY (1965), A.B., Oberlin College; Ph.D., California. *Professorial Lecturer in Chemistry.*
- CHARLES BRADY (1967), B.M., University of South California. *Lecturer in Music.*
- IRVING A. BREGER (1957), Ph.D., Massachusetts Institute of Technology. *Adjunct Professor of Earth Sciences.*
- STEVEN BREWSTER (1964), Dpl., Curtis Institute. *Lecturer in Music.*
- JANE K. BROOKS (1967), A.B., M.A., Smith. *Lecturer in English.*

EARL BRYANT (1965), B.A., University of Texas; M.A., American. *Lecturer in Mathematics & Statistics.*

THELMA K. BURKHALTER (1966), A.B., M.A., George Washington. *Lecturer in English.*

PAUL H. BYERS (1967), B.A., American; M.S., Columbia. *Lecturer in Communication.*

CHARLES L. BYRD (1964), Virginia Polytechnic. *Adjunct Professor of Music.*

WILLIAM CALFEE (1945), Phillips Gallery; Ecole de Beaux-Arts, Paris; Catholic; Cranbrook School of Art. *Adjunct Professor of Art.*

HOWARD H. CAMPAIGNE (1952), B.S., M.S., Ph.D., Northwestern. *Adjunct Professor of Mathematics & Statistics.*

WILLIAM J. CAMPBELL (1962), B.A., North Texas State College; B.S., M.S., Texas; Ph.D., Ohio. *Professorial Lecturer in Chemistry.*

RANDALL S. CASWELL (1957), S.B., Ph.D., Massachusetts Institute of Technology. *Adjunct Professor of Physics.*

GEORGE N. CATRAVAS (1967), D. Ch., University of Athens; Ph.D., University of Leeds, England; D. Sc., University of Paris (Sorbonne). *Professorial Lecturer in Biology.*

DORIS CELARIER (1962), B.A., North Dakota; M.A., Northwestern. *Lecturer in English.*

JEAN CHALIFOUX (1963), Diploma, Curtis Institute. *Lecturer in Music.*

JOHN C. CLENDENIN (1951), B.S., Mansfield State Teachers College; M.A., Bucknell. *Professorial Lecturer in English.*

MARVIN M. COHEN (1967), B.A., Brooklyn College; M.S., Ph.D., American. *Professorial Lecturer in Physics.*

MARK H. CONNOR (1958), A.B., American; M.S., Ph.D., University of Maryland. *Professorial Lecturer in Biology.*

SYDNEY CONNOR (1965), A.B., Western State College of Colorado; M.A., Yale; M.A., Columbia; Certificate, Army War College. *Lecturer in English.*

HAROLD H. COOPER (1966), B.A., M.A., University of Virginia. *Lecturer in English.*

JEROME CORNFIELD (1949), B.A., New York University. *Adjunct Professor of Mathematics & Statistics.*

CHARLES S. CURTIS (1967), B.S., American. *Lecturer in Earth Sciences.*

NICHOLAS DANILOFF (1966), A.B., Harvard; B.A., M.A., Magdalen College, Oxford, England. *Professorial Lecturer in Communication.*

GENE DAVIS (1958), University of Maryland; Wilson Teachers College. *Lecturer in Art.*

DOROTHY L. DAY (1962), B.A., American. *Professorial Lecturer in Art.*

PHILIP DESIND (1957), B.S., M.S., College of the City of New York. *Adjunct Professor of Mathematics & Statistics.*

VLADIMIR V. DESMITT (1958), B.S., M.A., New York University. *Professorial Lecturer in Sociology.*

RAYMOND G. DICK (1966), B.S., Boston University. *Professorial Lecturer in Communication.*

WILLIAM R. DODGE (1966), B.S., Ph.D., Stanford. *Adjunct Professor of Physics.*

DAVID J. DRUM (1968), B.A., Dickinson College; M.A., American. *Lecturer in Education.*

GEORGE N. ECKLUND (1952), B.A., Duke; M.A., Ph.D., Minnesota. *Professorial Lecturer in Economics.*

ELIZABETH L. EISENSTEIN (1958), B.A., Vassar; M.A., Ph.D., Radcliffe. *Professorial Lecturer in History*.

GERALD ELBERS (1956), A.B., Middlebury; M.A., Minnesota. *Professorial Lecturer in English*.

FRANK B. EVANS (1967), B.A., Pennsylvania State University; M.A., Pennsylvania University, Ph.D., Pennsylvania State University. *Adjunct Professor of History*.

VICTOR EVJEN (1959), B.A., Wittenberg College; B.A.S., George William College; M.A., Chicago. *Professorial Lecturer in Sociology*.

NORMAN S. FEINGOLD (1965), A.B., Indiana; M.A., Clark; Ed.D., Boston. *Professorial Lecturer in Psychology*.

BORIS FILIPOFF (1968), B.A., Leningrad Oriental Institute; M.A., Leningrad Institute of Industrial Construction. *Professorial Lecturer in Languages & Linguistics*.

LUCILE FIREY (1960), B.A., M.A., American. *Adjunct Professor of Art*.

DONALD WINSTON FLAGE (1968), B.S., State University of New York; M.S., U.S. Naval Post Graduate School. *Lecturer in Mathematics & Statistics*.

SIDNEY FORREST (1963), B.A., Miami; M.A., Columbia. *Lecturer in Music*.

LOUIS FRANA (1958), B.S., Minnesota Teacher's College; LL.B., University of Virginia; M.A., Minnesota. *Professorial Lecturer in Speech Arts*.

ISAAC FRANCK (1956), B.S., N.Y. University; Ph.D., Maryland. *Professorial Lecturer in Philosophy and Sociology*.

ROBERT M. FRIEDENBERG (1967), B.A., Park College; M.S., Mississippi; Ph.D., Connecticut. *Lecturer in Chemistry*.

JOHN GALVIN (1965), B.S., Butler; M.S., Catholic. *Professorial Lecturer in Sociology*.

CHRISTOPHER B. GARNETT, JR. (1957), B.S., Princeton; Ph.D., Litt.D., Edinburgh, Scotland. *Professorial Lecturer in Philosophy*.

SAUL GASS (1965), B.S., M.A., Boston University; Ph.D., University of California. *Adjunct Professor of Mathematics & Statistics*.

IRVING GEDANKEN (1959), B.A., Brooklyn College. *Lecturer in Mathematics & Statistics*.

EDNA MAE GEORGE (1964). *Lecturer in Music*.

ARTHUR C. F. GILBERT (1966), B.S., M.A., Ph.D., University of Nebraska. *Professorial Lecturer in Education*.

NEVA GREENWOOD (1953), B.M., Kansas Conservatory; M.M., American Conservatory. *Professorial Lecturer in Music*.

MELVIN A. GRAVITZ (1967), B.A., M.A., George Washington University; Ph.D., Adelphi University. *Adjunct Professor of Psychology*.

HENRY C. GREGORY (1958), B.S., LL.B., West Virginia; M.A., Michigan. *Adjunct Professor of Education*.

THOMAS GRUBISICH (1967), B.S., Marquette. *Lecturer in Communication*.

EDWIN E. GUNBERG (1957), B.A., St. Olaf; M.A., Ph.D., Iowa State. *Adjunct Professor of English*.

JAMES A. GUSTAFSON (1968), B.A., M.A., Ohio State. *Professorial Lecturer in Communication*.

WALLACE B. HAGERHORST (1963), B.A., Washington University. *Lecturer in Health Physical Education & Recreation*.

VIRGINIA HARRHAM (1964), A.B., Morehead State. *Lecturer in Music*.

MICHAEL C. HARRIS (1966), B.A., American. *Lecturer in Communication*.

JOHN K. HARTSOCK (1957), M.S., University of Cincinnati. *Professorial Lecturer in Earth Sciences*.

- WILLIAM W. HAYTHORN (1967), A.B., West Virginia University; Ph.D., University of Rochester. *Adjunct Professor of Psychology.*
- ANITA HERSEY (1965), B.A., Mt. Holyoke; M.A., Radcliffe. *Lecturer in English.*
- MONIQUE HOVELY (1965), License, University of Paris; Diplôme Technique de Bibliothécaire, University of Paris. *Lecturer in Languages & Linguistics.*
- OSCAR B. HUNTER, JR. (1952), B.S., Catholic; M.D., Georgetown University. *Adjunct Professor of Biology.*
- JOSEPH C. HWANG (1960), B.A., Washington Missionary College; M.S., Ph.D., University of Maryland. *Adjunct Professor of Biology.*
- PHILIP W. IDE (1960), B.Ed., Keene Teachers College; M.A., New Hampshire. *Professorial Lecturer in English.*
- WALTER W. JACOBS (1952), B.S., College of the City of New York; M.A., Ph.D., George Washington. *Adjunct Professor of Mathematics & Statistics.*
- ARTHUR JAFFE (1950), B.A., Florida. *Lecturer of Mathematics & Statistics.*
- ROBERT P. JARDIN (1967), B.Ed., University of Hawaii; M.A., San Francisco State College. *Lecturer in Education.*
- NELDON L. JARVIS (1964), B.S., Brigham Young; Ph.D., Kansas State. *Lecturer in Chemistry.*
- WILLIAM H. JENKINS (1950), B.S., Wilson Teachers College; M.A., Catholic. *Adjunct Professor of Education.*
- FLGY S. JOHNSON (1958), Ph.D., Catholic. *Adjunct Professor of Mathematics & Statistics.*
- VICTOR KAMBER (1967), B.S., University of Illinois; M.A., University of New Mexico. *Lecturer in Speech Arts.*
- BENNY L. KASS (1966), B.S., Northwestern; LL.B., Michigan. *Adjunct Professor of Communication.*
- KERIM K. KEY (1951), B.A., Robert College; M.A., California; Ph.D., American. *Adjunct Professor of History.*
- ERVIN KLINKON (1964), B.M., Houston; M.M., University of Maryland. *Lecturer in Music.*
- ALAN H. KYBER (1965), B.A., Furman; M.A., George Washington. *Lecturer in Health, Physical Education & Recreation.*
- STEPHEN KRAFT (1958), A.B., Bucknell. *Adjunct Professor of Art.*
- CARL A. KRAMER (1967), A.A., A.B., George Washington University. *Lecturer in Communication.*
- JOHN KUIPER (1965), B.A., Kentucky; M.A., Ph.D., Iowa. *Adjunct Professor of Communication.*
- BERNICE LAMBERTON (1962), B.S., Rhode Island; M.A., Brown; Ph.D., Maryland University. *Professorial Lecturer in Education.*
- SUPAJEE LAPCHAROEN (1967), B.S., Maryland. *Lecturer in Languages and Linguistics.*
- LAWRENCE LAURENT (1964), *Adjunct Professor of Communication.*
- ROBERT LAUTMAN (1965), Montana State. *Professorial Lecturer in Art.*
- HUBERT LECKIE (1957), Crane College. Art Institute. New Bauhaus School. *Adjunct Professor of Art.*
- ALLAN LEFCOWITZ (1965), B.A., University of Buffalo; M.A., Ph.D., Boston University. *Professorial Lecturer in English.*
- BARBARA LEFCOWITZ (1965), B.A., Smith; M.A., State University of New York at Buffalo. *Lecturer in English.*
- NEIL ANN LEVINE (1966), B.A., Cornell; M.A., Columbia. *Professorial Lecturer in Languages & Linguistics.*

EUGENE J. LIPMAN (1961), B.A., Cincinnati; M.H.L., Hebrew Union College. *Lecturer in Religion*.

NICHOLAS J. LONG (1967), A.B., Wayne State; M.Ed., Ph.D., Univ. of Michigan. *Professorial Lecturer in Education*.

SAMUEL B. LYERLY (1967), B.A., M.A., Ph.D., University of North Carolina. *Adjunct Professor of Psychology*.

WERNER LYWEN (1964), Berlin State Academy of Music. *Adjunct Professor of Music*.

ANDREJ MACEK (1958), B.S., Georgetown; M.S., Ph.D., Catholic. *Adjunct Professor of Chemistry*.

BELA C. MADAY (1962), Ph.D., Pazmany University, Budapest. *Adjunct Professor of Anthropology (SIS)*.

JAVIER MALAGÓN (1965), Licentiate in Law, University of Madrid; Doctoral in Law, University of Madrid. *Professorial Lecturer in History*.

JOHN E. MARLOW (1963), B.A., American. *Professorial Lecturer in Music*.

HELEN MARTZ (1960), B.A., Pennsylvania; Ph.D., Bryn Mawr; M.S.W., Pennsylvania School of Social Work. *Adjunct Professor of Sociology*.

NANCY MATHENY (1967), B.A., M.M., University of Maryland. *Lecturer in Music*.

ELIZABETH H. MATTHEWS (1967), B.S., Rutgers; M.A., American. *Lecturer in Communication*.

IRVING MAY (1964), B.S., City College of New York; M.S., George Washington. *Lecturer in Chemistry*.

JAMES A. MCCAFFERTY (1959), B.Sc., M.A., Ohio State. *Lecturer in Sociology*.

MERRIL T. MCCORD (1967), B.A., Kentucky; M.A., Stanford. *Lecturer in Communication*.

WILLIAM M. MCDOWELL (1967), B.A., DePauw; M.A., American. *Lecturer in Communication*.

ROSWELL D. MERRICK (1962), B.S., Springfield; M.A., New York; Ed.D., Boston. *Professorial Lecturer in Health, Physical Education, and Recreation*.

SYLVIA MEYER (1953), B.A., Wisconsin; Artist's Diploma and Teacher's Certificate, Peabody Conservatory of Music. *Lecturer in Music*.

JOSEPH V. MICHALSKI (1963), A.B., Johns Hopkins; Ph.D., Princeton. *Professorial Lecturer in Biology*.

EDNA K. MONSEES (1967), B.S., University of Missouri; M.A., Ph.D., American. *Professorial Lecturer in Education*.

JOHN MOREHEN (1967), B.A., New College, Oxford, England. *Lecturer in Music*.

WILLIAM MOSIER (1961), A.B., Washington University; M.A., Ph.D., Northwestern. *Professorial Lecturer in English*.

SAMUEL A. MULLINS (1967), B.S., Havana. *Lecturer in Communication*.

MASAHITO NISHIDA (1966). *Lecturer in Health, Physical Education, and Recreation*.

RICHARD PARNAS (1964), Curtis Institute of Music. *Lecturer in Music*.

KENNETH PASMANICK (1962), American. *Lecturer in Music*.

F. TAYLOR PECK (1968), B.S., Spring Hill College; M.A., Ph.D., Georgetown. *Professorial Lecturer in History*.

BERNARD POSNER (1959), A.B., Cincinnati; M.A., American. *Adjunct Professor of Communication*.

B. KIRK RANKIN, III (1967), B.S., M.S., Georgetown; Ph.D., Pennsylvania. *Professorial Lecturer in Languages and Linguistics*.

- VIRGINIA RAPPORT (1965), B.A., Meredith College. *Lecturer in English.*
- WILLIAM H. READ (1967), American; Maryland. *Lecturer in Communication.*
- HOWARD R. REISS (1967), B.Ac.E., M.Ac.E., Brooklyn Polytechnic Institute; Ph.D., Maryland. *Adjunct Professor of Physics.*
- RALPH ROBIN (1956), B.S., Pittsburgh. *Adjunct Professor of English.*
- PRESTON ROCKHOLT (1967), A.B., Wheaton College; M.A., American Conservatory of Music; Ph.D., Northwestern. *Lecturer in Music.*
- MORRIS ROSENBERG (1961), B.A., Brooklyn College; M.A., Ph.D., Columbia. *Adjunct Professor of Sociology.*
- HARRY ROSENBLATT (1958), B.S., M.S., Ph.D., George Washington. *Adjunct Professor of Mathematics and Statistics.*
- GORDON ROTH (1967), B.A., University of Minnesota. *Lecturer in Communication.*
- ERNEST RUBIN (1950), B.S.S., College of the City of New York; M.A., Ph.D., Columbia. *Adjunct Professor of Mathematics and Statistics.*
- DIANE RUSSELL (1966), A.B., Vassar. *Professorial Lecturer in Art.*
- LUCILE E. ST. HOYME (1964), Ph.D., Oxford, England. *Adjunct Professor of Anthropology.*
- JERROLD SANDLER (1967), B.A., M.A., New York University; Advanced Work at University of Michigan. *Professorial Lecturer in Communication.*
- ARMAND SARRO (1961), New England Conservatory of Music; Juilliard School of Music. *Lecturer in Music.*
- LAURA M. SCHRENK (1968), Ph.D., University of Tubingen. *Lecturer in Philosophy.*
- HUGO SCHULZE (1947), B.S., M.A., American. *Adjunct Professor of Health, Physical Education, and Recreation.*
- ABRAHAM SCHWEBEL (1964), B.S., Brooklyn College; M.S., New York; Ph.D., Maryland. *Lecturer in Chemistry.*
- WILSON L. SCOTT (1961), B.A., Yale; M.A., Ph.D., Johns Hopkins. *Professorial Lecturer in Mathematics and Statistics.*
- RAYMOND J. SEEGER (1954), B.A., Rutgers; Ph.D., Yale. *Adjunct Professor, Division of Natural Sciences and Mathematics.*
- ROBERT B. SHAFFER (1963), B.A., Oberlin; M.A., Ph.D., Harvard. *Adjunct Professor of Art.*
- DANIEL SHANKS (1961), B.S., Chicago; Ph.D., Maryland. *Professorial Lecturer in Mathematics and Statistics.*
- CLAIRE SHERMAN (1966), A.B., Radcliffe; Ph.D., Johns Hopkins. *Professorial Lecturer in Art.*
- ESMA A. SHIELD (1965), B.S., Longwood College; M.S., Ed.D., Teachers College, Columbia University. *Professorial Lecturer in Education.*
- SYLVIA K. SHUGRUE (1960), B.A., Wilson Teachers College; M.A., Denver. *Professorial Lecturer in Education.*
- JIMMIE J. SILMAN, JR. (1963), Texas Tech. *Professorial Lecturer in Communication.*
- WALT R. SIMMONS (1949), B.A., M.A., Kansas. *Adjunct Professor of Mathematics and Statistics.*
- GEOFFREY SIMON (1964), A.B., Duke; M.A., Pennsylvania State University. *Lecturer in Music.*
- STANLEY V. SMITH (1956), B.A., Buffalo; M.A., Cornell; Ph.D., Columbia. *Adjunct Professor of Education.*
- RICHARD SORENSEN (1966), Ph.D., University of Washington. *Professorial Lecturer in Mathematics and Statistics.*

- IRVING A. SPALDING (1962), B.A., American. *Professorial Lecturer in Communication.*
- DOROTHY STAHL (1965), B.A., Smith; Juilliard. *Lecturer in Music.*
- JANE SUMMERS STANHOPE (1966), B.A., George Washington. *Lecturer in English.*
- THOMAS A. STANHOPE (1967), B.A., Maryland; M.A., George Washington. *Lecturer in English.*
- WILLIAM H. STRUHS, JR. (1964), B.S., College of Charleston; M.A., Iowa. *Lecturer in English.*
- CHANG-SU SWANSON (1967), B.A., MacMurray College; M.A., University of Washington. *Lecturer in Languages and Linguistics.*
- DALMAS A. TAYLOR (1967), B.A., Western Reserve; M.S., Howard University; Ph.D., University of Delaware. *Professorial Lecturer in Psychology.*
- JOHN K. TAYLOR (1957), B.S., George Washington; M.S., Ph.D., Maryland. *Adjunct Professor of Chemistry.*
- PRENTISS TAYLOR (1955), Art Students League. *Professorial Lecturer in Art.*
- JOHN G. THEBAN (1961), M.S., Virginia; Certificate. New York School of Social Work. *Professorial Lecturer in Sociology.*
- FEODOR TIHILHEIMER (1961), Ph.D., Berlin. *Adjunct Professor of Mathematics and Statistics.*
- MARK THOMAS (1961), Diploma. Baltimore City College; Peabody Conservatory of Music. *Adjunct Professor of Music.*
- VINCENT TROFI (1965), B.A., Providence College. *Lecturer in English.*
- CLAUDIA R. UPPER (1960), B.A., Wellesley; M.A., Michigan. *Lecturer in History.*
- LEO A. WALL (1967), B.S., Ph.D., Catholic. *Adjunct Professor of Chemistry.*
- GERALD WARTOFKY (1967), American; Art Student's League; Academic di Belle Arte, Florence. *Lecturer in Art.*
- IVOR WAYNE (1950), M.A., Harvard. *Adjunct Professor of Sociology.*
- MARGARET L. WEAVER (1964), A.B., Radcliffe. *Lecturer in English.*
- VIRGINIA FREEMAN WEIL (1963), B.S., Wisconsin; M.S., California. *Professorial Lecturer in Speech Arts.*
- GEORGE WEINER (1966), B.S., M.A., Boston University. *Lecturer in English.*
- MATTHEW JACKSON WHITHEAD (1966), A.B., Johnson C. Smith University; M.A., Columbia University; Ed.D., New York University. *Professorial Lecturer in Education.*
- ROBERT G. WILLIAMSON (1964), B.S., Wilson Teachers College; M.Ed., D.Ed., Maryland. *Professorial Lecturer in Biology.*
- JOHN WILLIAM WRENCY, JR. (1963), B.A., M.A., University of Buffalo; Ph.D., Yale University. *Adjunct Professor of Mathematics & Statistics.*
- JOHN WUNDERLICH (1968). *Lecturer in Music.*
- JOHN YARNALL (1963), A.B., M.A., Washington and Jefferson; Ph.D., Pittsburgh. *Professorial Lecturer in English.*
- EDDIE TOK SENG YO (1965), B.A., Dutch Roman Catholic Canisius College. *Lecturer in Languages & Linguistics.*
- ELIZABETH L. YOUNG (1966), A.B., Wellesley. *Lecturer in Communication.*
- ROBERT F. ZIPP (1963), B.Mus.Ed., Northwestern. *Lecturer in Music.*
- JOSEPH L. ZOK (1965), M.A., George Washington University. *Lecturer in Health, Physical Education & Recreation.*

THE AMERICAN UNIVERSITY
SCHOOL OF BUSINESS ADMINISTRATION
WASHINGTON, D. C. 20016

Dear Reader:

We welcome this opportunity to introduce you to our School. We are young and growing rapidly; proud of our goals, philosophy, and achievements; of our Faculty, alumni, and programs. We hope, after reading this Catalog, you will share our excitement and enthusiasm.

Whether undergraduate or graduate study, consider carefully the many varied and satisfying opportunities available to our graduates. Business is a challenging, exciting, rewarding career field. Our alumni are eagerly demanded, not only by business, but by government, the military, voluntary associations, and even religious and non-profit organizations.

While no school can teach more than a small part of what successful executives must know, and while your future must largely depend on you yourself, the record clearly shows that our School provides an excellent educational foundation for personal and professional growth and achievement.

F. R. Kappel, retired Chairman of American Telephone and Telegraph Co., well expressed the major goal of all organizations: "Our number one aim is to have in all management jobs, the most vital, intelligent, positive and imaginative men we can possibly find." Paul G. Hoffman, business leader, government executive, international public servant, underscored the problem and the opportunity: "The great need of the world today is for one million managers and administrators."

The pages that follow should help you choose wisely both your academic career and after-graduation future. We also urge you to visit our Campus and to write us for further details.

Business now, more than ever before, must have the highest quality of leadership if our free society is to survive. This means that in preparing tomorrow's business leaders, we need students of the highest caliber. But, student caliber must not be defined solely in intellectual terms, or measured primarily by the ability to memorize and recite back information that professor and textbook provide. Executives must make decisions, solve problems, put knowledge to work. Personal characteristics of honesty, integrity, determination, initiative, imagination, alertness, ability to get results through people, and willingness to work and accept responsibility are equally important in executive success.

We seek to do five years work in the four of our undergraduate curriculum, and make even more stringent demands in our graduate programs. We educate today for the demands of tomorrow in a world whose rapid change makes the picture of tomorrow blurred and indistinct. We therefore need superior students, measured by all of the above criteria, if our Faculty is to succeed in its mission.

If you wish an effective, liberalizing education that will help you grow and develop and prepare you for a satisfying and rewarding future, and if you can meet our admission standards, we invite your application to our School.

*Sincerely,
Nathan A. Baily, Dean*

SCHOOL OF BUSINESS ADMINISTRATION

"The first School of Business Administration in the Nation's Capital"

History Although The American University conferred degrees in Business Administration in the 1920's and 1930's, the first formally organized and continuous program in Business Administration was established in June 1946. Known as the Business and Industrial Management curriculum, it was an intensive 90 credit certificate program developed for returning veterans on the basis of a special report of the Society for Advancement of Management. Jurisdictionally, the BIM Program was in the Department of Economics.

With the growth in enrollment and the plan to establish a School of Business Administration, this program was expanded to a full four year degree of Bachelor of Science in Business Administration. Majors were established in Accounting, Transportation, Real Estate, Advertising, Retailing, Banking, and Personnel. The business programs grew to the largest single area of enrollment in the University and became a Division of Business Studies within the Economics Department.

Continued growth was recognized by retitling the Department "Economics and Business Administration" and then by separation into two Departments. In 1949, the Master of Business Administration degree was authorized. On April 22, 1955, the Department of Business Administration, with the largest enrollment in the University at the undergraduate and master's level, became a School. *The nation's capital for the first time had a School of Business Administration.*

The absence until then of such a School is most significant in terms of the stature and importance accorded to private business enterprise at the seat of the federal government and of the lack of any strong feeling of a need for professional education in business administration among those responsible for the daily operations of our country's largest business. The drastic change created by the School is perhaps most dramatically illustrated by government employees now making up half of the School's part-time enrollment. Their understanding of how our business system actually operates will be determined to a large degree by the School's effectiveness in the classroom. The School thus serves as *a unique, non-political meeting ground for business and government that can do much to create better understanding and greater cooperation between these two major elements in our society.*

In April 1957, the School was authorized to offer the Doctor of Philosophy in Business Administration degree, thus adding to its curriculum the highest degree of academic scholarship. In January 1966 the Doctoral Association was formed to promote the highest standard of scholarship and intellectual excellence among faculty, candidates and alumni.

The School is a member of the Middle Atlantic Association of Colleges of Business Administration (its Dean served as President, 1964-5) and a charter member of the Assembly of the American Association of Collegiate Schools of Business.

Philosophy of the School The primary purpose of The American University School of Business Administration is to prepare men and women for positions of executive responsibility and for leadership in our society. Whether the career be in private business or in a non-profit institution, in education as a teacher of business or an administrator, in the military, or in an area of government calling for competence in business management whether the career be at home or overseas, the School's programs are designed to help develop the knowledge, educational horizons, background, and skills required for eventual success in policy-making positions. The programs call for a broad base of general education, an understanding and appreciation of our private enterprise system, ability to think in terms of the business climate and overall needs and problems, familiarity with organizational principles and behavior, analytical competence, and, above all, a knowledge of the "why's."

The School believes its graduates must clearly understand, appreciate, implement in their careers, and be able to explain the following principles:

- The basic measure of efficiency of the modern business unit in terms of operations and contribution to our society is its *profitability*. Without profit, no business enterprise endures or serves society. Without *profit and private enterprise*, the American achievement would have been impossible. Without economic freedom, political freedom cannot endure.
- The need to make a *profit* in *competition* with other firms, domestic and foreign, motivates and drives a business to higher efficiency, to expansion, to innovation, to rapid exploitation of new developments in science and technology. *Competition*, which provides rewards for success and penalties for failure, is a harsh task master.
- Today, business is a profession and the business leader is a leader in our society. As such, he not only must bring knowledge, competence, and understanding to the business unit, but must also always maintain *high ethical standards* in all his activities. The future of our economy depends to a large degree on his *creative ability*, the quality of his *decisions*, and the ethical level of his *actions*.
- The business unit must contribute to the advancement of society as well as to its own growth, by meeting *responsibilities* to employees, stockholders, and the general public, and by increasing the amount of goods and services, making them available at the lowest possible cost and *thereby increasing standards of living throughout the world*.
- *Ethics* and *morality*, the recognition of the *dignity and worth of individual human beings*, are the *foundations of sound and profitable business operations and satisfying personal careers*.

ives of the Curricula Education, to be meaningful and long-lasting, must be far more than the faculty's filling with large amounts of information the presumably empty minds of students. Students of business administration must develop intellectual capacity and acquire knowledge, but they must also know how to use that intellectual capacity and knowledge in solving problems. Because they are planning careers in a dynamic, ever-changing world, they must know how to differentiate between principles and precedents . . . they must be curious, flexible, imaginative, innovative. Because they are achieving results through people, they must develop competence in working with others and a high standard of personal, moral, and ethical values.

Because demands upon executives in every aspect of their activities continue to grow, demands for higher and higher performance and greater knowledge and ability by students in the School likewise continue to grow. *This "open end" is a basic characteristic of professional education and a major reason why such education calls for hard work, long hours, and rigorous discipline.*

Education means "a leading out." To be successful, it must be two-way. No matter how talented the faculty or how well-constructed the curriculum, students must also participate actively. *The primary obligation and responsibility for personal and professional development and for achieving the objectives that follow, rest, in the final analysis, with each individual student.*

This Faculty, in teaching and in design of curricula, seeks to help each student develop to professional levels his ability to:

- Think, to identify and analyze organizational problems, and to make effective decisions
- Coordinate men, machines, and materials into profit-making activity
- Analyze operations in terms of measured facts for purposes of planning and control
- Find needed information and appraise its accuracy and usefulness
- Present ideas effectively, both orally and in writing, and to utilize such ideas in formulating plans and policies
- Understand the economic, political, social, and international environment within which business operates
- Deal with agencies of government in business relationships
- Recognize the social and civic obligations of business and the businessman
- Develop his personal set of moral and ethical values
- Work effectively with people at all levels and of differing outlooks, recognizing their dignity as individuals, and their roles as members of the group.

The curricula provide the foundation *both* for immediate on-the-job success and for continued advancement to increased responsibility. They help each student develop a satisfying personal and professional philosophy. To further these objectives, the School offers each student individual counseling and stresses a close student-faculty relationship.

Business students share with liberal arts students the need for a *liberal* education. The objectives of education in business administration are the same as the objectives of liberal arts education, but they

are reached through a different subject matter—one that puts an increasingly heavy premium on analysis, integration, problem solving, and decision making and, therefore, one that should be characterized by a stronger and more demanding intellectual discipline. For many students, business administration has proven a more effective tool than most other subjects for developing a sense of values and a personal philosophy.

The School believes there is no conflict between a liberal and a business education. It seeks to develop the skills, values, outlook, and personal philosophies associated with a true liberal, well-rounded education. It accomplishes this both by drawing on the College of Arts and Sciences for 45% of the credits required for its undergraduate degree and—equally or more important—by utilizing its own courses as vehicles for reaching the same educational objectives. The basic difference is one of emphasis; professional education stresses *both* knowledge *and* the ability to apply that knowledge to the solution of problems.

Effective teaching in business administration must be “liberalizing” to be good business education and the School follows this belief in its course objectives, approach, and level of teaching. It seeks to discover and teach the principles underlying the behavior of people in varied situations. It tries to develop the student’s capacity for logic, imagination, understanding, and reasoning. It requires clear, concise, and persuasive expression of ideas, both orally and in writing.

The School’s degrees are built on the premise that business administration calls for the broadest and most liberal education if its graduates are truly to become business leaders effective in managing people and organizations. Since degrees are awarded for proficiency in scholarship and attainment of educational objectives, quantitative requirements of credits are *minima*. Additional requirements may be added where deemed necessary. Many students, to secure a stronger educational foundation for career success, voluntarily elect courses beyond minimum requirements.

Degrees in business administration are *professional* degrees. They assume that the goal of each student is to secure the strongest possible educational preparation for personal and professional success. Since formal education is one of the major investments and most important developmental factors of the student’s life, he should pursue his studies areas of knowledge, desire to learn as much as possible in each course and always to go beyond the minimum, continuous curiosity, and alertness to current developments and their causes.

All curricula are available to part-time as well as full-time students.

UNDERGRADUATE DEGREES IN BUSINESS

Undergraduate Degrees The undergraduate curriculum builds limited professional specialization on the foundations of a broad general education. It combines courses in business and related fields with general studies in humanities, natural and social sciences, and mathematics.

Associate Degree in Business Administration

This is used largely by part-time students to mark somewhat better than "half-way" progress toward the Bachelor's degree toward which all credits satisfactorily completed apply. Earning it in the minimum of 66 credits, however, involves going out of the "ideal" sequence for the Bachelor's degree. A minimum average of "C" is required.

Limited concentrations are offered in General Business and in Accounting.

Bachelor of Science in Business Administration

This degree requires a minimum of 120 credits with at least "C" average and a minimum *average* of 1.2 to meet School (Category 2) and Major (Category 3) requirements (effective with students entering in and after Fall 1967).

CATEGORY 1—University Requirements (required by University and School)—54 credits:

General studies in basic areas of knowledge for broad, rounded education and as foundations. Designed to strengthen basic skills, provide background of knowledge whereby students can move easily in the world of ideas, and increase appreciation of values of our society.

Composition and Reading (6)	Science-Mathematics (12)
Physical education (4 non-credit units)	Statistics (6)
Social Sciences (12)	Approved Non-Business (6)
Humanities (12)	

CATEGORY 2—School of Business Administration Core Requirements—42 credits:

Fundamental management tools, exposure to basic area of business. Common core of broad, thorough foundation for all business students.

(a) Required (24 credits):

10.306 Introductory Accounting I (3)

10.307 Introductory Accounting II (3)

10.201 Business Law I (3)

10.465 Business Finance I (3)

11.300 Marketing I (3)

10.481 Principles of Production (3)

10.456 Principles of Management (3)

10.458 Business Policy (3)

(b) Choice of six according to major (18 credits):

10.302 Business Law II (3)

10.466 Business Finance II (3)

11.301 Marketing II (3)

10.491 Personnel and Manpower Management (3)

10.500 Private Enterprise and Public Policy (3)

11.526 Fundamentals of International Business (3)

10.431 Fundamentals of Income Tax (3)

55.410 Introduction to Data Processing (3)

10.558 Ethics in Management (3)

12.462 Fundamentals of Transportation and Logistics

CATEGORY 3—Major and area of concentration. 15 credits:

The major, an organized series or related courses, provides limited specialized competence. This major, like a major in any other school in the University, is the student's exploration in depth and shows his ability to master an integrated curriculum. The "vertical" part of his undergraduate education, it provides an exposure very different from the many first courses from various fields that make up so much of his program. The available majors are listed below.

While the major is usually selected for career preparation, the School core requirements provide an educational background for a career as a junior executive in almost any business field.

Students without clearly defined specialized interests major in General Business. All full-time students take the same courses for the first two years, at the end of which they can shift majors without loss of credits. Changing majors later than the beginning of the junior year can mean added courses.

The major must be officially selected (or confirmed) before registration for the first session of the Junior year. Forms must be acquired from and filed in the Office of Assistant Dean, Undergraduate Program.

This portion of the curriculum, therefore, provides a springboard to a first job and the basis for continued advancement. It does not prevent later career changes nor does it mean a narrow and limited view. The School core provides the overall viewpoint, relates specialized activities to the total pattern of operations, and builds in flexibility to meet future needs and situations.

CATEGORY 4—Electives, 9 credits:

In consultation with a counselor, students choose electives from business or non-business courses. Superior students may use electives for the Integrated Bachelor's-Master's Program (see below). Many use electives for a second concentration closely related to their major, e.g., Accounting for Finance majors, Marketing for Transportation majors, etc. Many go beyond 9 credits by carrying a heavier than average session schedule. This both strengthens career preparation and increases career opportunities.

The Majors GENERAL BUSINESS

This major, rather than providing specialization in one area, consists of fundamental courses from basic fields. It is an "across-the-board" background for a junior executive in any kind of organization, for qualifying for management training programs of large corporations, or for strengthening qualifications for present positions and preparing for future increased responsibilities.

By using electives, students can supplement one or more areas with advanced study and increase both their depth of background and flexibility of qualifications for various kinds of careers.

ACCOUNTING

An integrated education for students preparing for the CPA examination or for careers in industrial accounting, governmental service, or related fields such as law or management. Courses provide both techni-

cal competence in accounting theory and procedures, and an understanding of the significance of accounting information and its role in operational planning and control.

Students seeking the CPA should check specific requirements of their State and discuss programs with their adviser. *The Accounting Curriculum is registered in New York State.*

AUTOMATIC DATA PROCESSING SYSTEMS

The electronic computer is the symbol of the "Information Revolution" whose impact has scarcely yet been felt. An estimated 470,000 positions will be available in 1970 to men and women professionally educated in computer programming and data processing. Demand is expected to continue far greater than supply.

BUSINESS AND ECONOMICS

Demand for professional economists is growing rapidly in business, government, and higher education. Satisfactory completion of this major enables graduates who qualify for admission to complete either the University's M.B.A. or M.A. in Economics in one, rather than two, years of fulltime study or the equivalent in parttime study. By taking this economics major within the framework of the B.S. in B.A., students include in their curriculum an educational background of great advantage for business-oriented practice or teaching of economics.

FINANCE

The *Financial Management* concentration provides effective preparation for the future general manager, finance vice president, controller, treasurer, credit manager, or other executive whose responsibilities require a more intensive knowledge of and ability to utilize the institutions, procedures, and strategies of financial management.

The concentration in *Investments* contributes to competence in investing as an individual and for professional careers as financial and investment analysts, investment advisers, securities brokers, and registered representatives.

With the cooperation of the American Institute of Banking, *Commercial Banking* offers the opportunity to combine work experience with the educational resources of both organized Banking and the Finance Program.

INDUSTRIAL RELATIONS, PERSONNEL, AND MANPOWER MANAGEMENT

For any organization to function effectively, its executives must be well qualified in managing the human factors. If they fail here, they cannot achieve long term success in other objectives.

Personnel Management covers principles of recruitment, selection, training, supervision, motivation, compensation. Courses stress philosophy and rationale rather than mechanics and techniques.

Industrial Relations is concerned largely with union-management relations. Courses emphasize collective bargaining from the viewpoint of management's complex problems and in the context of total operations.

INTERNATIONAL BUSINESS

This pioneering and distinctive Program provides understanding of the international ramifications which so greatly affect business, economics, and politics. Future managers for domestic and overall operations, as well as for international business, will find this major most valuable.

The multinational enrollment, the multinational faculty, and the multinational institutions headquartered in Washington make possible better understanding and adaptation to international marketing, personnel, and legal conditions and to political nationalism.

MARKETING

Free marketing in a free economy is the heart of our economic system. Freedom of choice in the competitive marketplace is the economic equivalent of free political action. Marketing's critical role in profitable operations, its significance for economic growth, ever-sharpening competition between firms, industries and countries, and the subsequent emergence of a profession of marketing create a wide variety of challenging career opportunities for "creating" customers, thereby raising living standards.

PRODUCTION (INDUSTRIAL) MANAGEMENT

Production functions are studied as individual and related manufacturing processes and as a total integrated operation in relation to the other major functional areas. The impact of technology on the production process is examined, evaluated, and projected. Production decision-making factors, internal and external to the firm, are emphasized.

REAL ESTATE AND LAND PLANNING

Demands upon real estate men and women for knowledge and competence can no longer be met by the costly trial and error of experience. Transactions are too intricate, competition too keen. University education is now as essential here as for law, medicine, or engineering.

Washington is one of the world's greatest laboratories in real estate and construction and the School offers one of the country's most complete programs. Sequences in Appraisal and Property Management are officially accepted toward professional designations. Many alumni already head their own firms. The School cannot meet present demand for graduates, for both local and national employment.

STATISTICS

Statistical methods are increasingly used in managerial decisions. This major provides competence in both the quantitative tools and in the skills and backgrounds of the general executive who is the primary consumer of statistical analyses. By speaking both "languages," the graduate increases his usefulness and, thereby, his career opportunities.

TRANSPORTATION, LOGISTICS, AND TRAFFIC MANAGEMENT

Transportation and logistics are basic to the successful functioning of our economy. Increasing competitiveness, rapid technological change, recognition of need for more effective marketing and for fuller utilization of modern management tools have led railroads, motor carriers, and airlines, in particular, to seek men combining education in transportation with business administration and marketing management. Industries similarly demand traffic managers with a broad education in logistics, distribution management, and business administration.

Washington is the center of government activities relating to all modes of transportation. Resource materials for study abound and transportation agencies and carrier associations provide opportunities

for part-time employment while in school and full-time employment after graduation.

PRE-LAW

This major provides a strong base and a competitive advantage for a successful legal career. Without a basic competence in business, the modern practitioner faces serious problems. Without a knowledge of accounting, for example, it would be difficult to handle income or estate tax matters. Without a knowledge of accounting and finance, it would be difficult to prepare a registration statement for the Securities and Exchange Commission or to conduct hearings before the Federal Communications Commission, the Interstate Commerce Commission, etc. As a result, much of the highly desirable practice before government agencies is preempted by a comparatively few law firms which have developed the necessary business know-how.

The modern lawyer is called upon more and more to provide guidance for management decisions because, in today's relations between business and government, the legal channels through which the business judgment flows must often determine the action taken. In fact, many leading business executives were formerly members of law firms which had advised those companies on their intricate legal-business problems.

Course Sequence Sheet A basic responsibility of each student is registering properly each session. He must meet prerequisites and requirements for degree and major, avoid conflicts of required courses and meet other University requirements.

Each undergraduate receives a *Course Sequence Sheet*, an "ideal" session-by-session schedule which brings together in one place and coordinates University requirements governing all degrees, School, and major requirements. This is his major planning and scheduling tool.

Admission to the Undergraduate Program See page 24 for specific details.
Submit application and credentials to Director of Admissions, The American University, Washington, D. C. 20016.
Application may be made for any session—fall, spring or summer.

Advanced Standing for A's, Members of the Bar, A.I.B. Students CPA's or members of the Bar may receive 30 credits transfer.
Up to 16 credits may be awarded for satisfactorily completed American Institute of Banking courses.

Recommended High School Background The School recommends as much English, History, Social Science, and Public Speaking as possible and three or four years of Mathematics and a Foreign Language. Extra-curricular activity in debating, writing, and on business staffs of publications and part-time and/or summer employment in business will be helpful.

Opportunities for Superior Students Recognizing that students enter with different levels of ability and varying degrees of proficiency, the University has special programs whereby *superior students* substitute advanced for basic courses and/or enter with advanced standing (if sufficient, they may earn both B.S. in B.A. and M.B.A. in the time normal for the former alone).

EARLY ADMISSION—From junior year of high school.

WAIVER EXAMINATIONS—Electives in place of basic courses.

ADVANCED PLACEMENT—Placement in advanced courses.

ADVANCED STANDING—College credit for high school courses.

For details, see page 26

Increasingly, the Master's degree is prerequisite to professional positions. To facilitate superior undergraduates, an integrated course of study begins with the junior year and leads to the M.B.A. A student approved by this program may—

- a. Tentatively select in his junior year his elective M.B.A. Comprehensive Field and plan Major and electives accordingly.
- b. Apply toward M.B.A. credits earned satisfactorily in graduate level courses taken during senior year in excess of hours needed and not used to meet specific course requirements for B.S. in B.A.
- c. Be advanced to candidacy for M.B.A. upon entering his year of graduate study, if his average is B or better in his Major.
- d. Complete all-work for the M.B.A. in one year.

Superior junior college graduates admitted to the School may thus complete both B.S. in B.A. and M.B.A. in three years rather than four.

Work-Study Because effective education for business leadership requires experience as well as academic study, the School encourages full-time students with better than average grades to participate in part-time employment. This can generally be arranged through the University Placement Office.

Regardless of future career plans, part-time selling experience is particularly recommended. As a step in professional growth, the student is expected to confront a prospective buyer with an offer of goods and services, to create a market situation in which goods and services are moved for profit.

Leading Washington firms cooperate in providing this experience which enables the graduates to approach prospective employers with both classroom study and work "know-how." This combination has been a major factor in the unusual record of success of the School's graduates.

GRADUATE DEGREES IN BUSINESS

Admission to the See page 36.

Graduate Program *Application may be made for any session—fall, spring or summer.* Note the Admission Test for Graduate Study in Business scores must be provided.

If an applicant has missed the University deadline for admission to degree status, he should: (1) apply for admission to the College of Continuing Education; (2) be counselled by the School of Business Administration as well; and (3) apply for admission to degree status for the following session. No more than 12 graduate credits may be transferred from non-degree status.

Students must clear admission status before registering.

Qualifications THE MASTER OF BUSINESS ADMINISTRATION

for Admission Admission is open to holders of bachelor's degrees from accredited four-year undergraduate colleges and universities whose academic performance, professional experience, and personal qualities indicate promise of success in this program and who earn *satisfactory* scores on the Admission Test for Graduate Study in Business.

In unusual circumstances, applicants unable to take Test before registration may be permitted to enroll. If previous academic performance is sufficiently high, they may be admitted with good standing contingent upon earning a satisfactory score within 3 months following registration. Otherwise, they should apply for admission to the College of Continuing Education until they can present a satisfactory score as part of their credentials for admission to the School of Business.

Letters of recommendation and/or evidence of professional attainment may be submitted in support of applications.

In exceptional cases, applicants not meeting these qualifications may be considered on the basis of *superior* scores on the Admission Test for Graduate Study in Business.

THE PH.D. IN BUSINESS ADMINISTRATION

Admission is based on superior academic performance and personal qualities, generally including previous completion of a Master's degree. Admission to the Ph.D. is separate from admission to a Master's degree, whether the Master's degree is from The American University or elsewhere. Applicants for the Ph.D. must earn *satisfactory* scores on the Admission Test for Graduate Study in Business (applicants who previously earned such scores need not take the Test again).

Waiver Examinations Waiver Examinations have been developed for students: (1) without formal education, but with strong career backgrounds and/or self-study in the areas of the First Year Basic Requirements courses; and (2) who have completed satisfactorily in previous study similar, but not necessarily equivalent, courses.

To be eligible for Waiver Examinations, applications must be filed in the M.B.A. or Ph.D. Office within 6 months following date of the first registration as a degree candidate. If application is approved, Waiver Examinations must be taken within one calendar year following that date of registration.

A student who registers for a First Year Basic Requirement course at The American University and does not receive at least a "C" grade, may *not* apply for a Waiver Examination, but must re-register for that course.

The Admission Test for Graduate Study in Business Used as an admissions criterion by the leading graduate schools of business administration, the Test is offered four times a year in various locations. Registration, via application form, should be received by Educational Testing Service no later than two weeks before date of Test for examinations in U.S. and its territories or Canada. For candidates tested in other countries, registration deadline is one month before Test.

The Bulletin of Information for Candidates is available from The Educational Testing Service, Box 966, Princeton, New Jersey 08540. The ATGSB is *not* designed to test specific knowledge in business administration. It seeks to measure *aptitude* for, not knowledge of, business administration by seeing whether candidates can understand and use words and numbers and reason effectively. Normal undergraduate education should provide sufficient general knowledge to deal adequately with test questions.

Applicants for Summer and Fall should take Test in February or April; and for Spring, July or November.

Required Graduate Study Registration See page 42.

Continuous Study Any degree candidate, full-time or part-time, who has not completed course requirements and who has been out of attendance for two consecutive sessions (excluding Summer), must meet all degree requirements prevailing when he returns. A degree candidate who does not register for classes or graduate study for one or more years and wishes to return will be considered as applying for new admission.

Transferability of Credits Taken at Military Institutions Regionally accredited military institutions (e.g., U.S. Naval Post-Graduate School at Monterey) are treated as other regionally accredited institutions. Six graduate credits, where appropriate to student's program, may be transferred toward either M.B.A. or Ph.D. from the National War College,* Industrial College of the Armed Forces,* Army War College, Navy War College, Air War College, and Foreign Area Specialist Training Program (Soviet Union, Detachment "R" Oberammergau).

Credits may be transferred only for the full course in residence and for the three service colleges (Army, Navy, and Air), the senior course only, if a distinction is made between that course and others.

The Master of Business Administration Degree

The M.B.A. degree builds upon a common foundation: either an undergraduate business major or, by class performance or examination, demonstrated mastery of fundamental tools and concepts in First Year Basic Requirements courses. By completing these First Year courses, students who did not major in business receive a foundation for advanced study.

Course Requirements Without Advanced Standing, two academic years of full-time study are required (54 credits). The length of part-time study depends upon number of courses carried per session and registration in Summers.

ADVANCED STANDING may be received for: (1) previous satisfactory completion of FIRST YEAR BASIC REQUIREMENTS courses or equivalents or by passing *Waiver Examinations**; and (2) transfer from other accredited graduate or law schools of up to 6 credits of appropriate SECOND YEAR ADVANCED REQUIREMENTS courses if at least "B" grades. Generally, undergraduate Business majors can complete the M.B.A. degree in 30-36 credits.

FIRST YEAR BASIC REQUIREMENTS COURSES: A "core" of 24 credits that provides, despite differing undergraduate majors, common, balanced foundation of competence in primary "tool" areas prerequisite to advanced study. *All First Year Basic Requirements courses must be completed satisfactorily before advancement to candidacy.*

10.400 Use of Accounting Methods (3)

10.401 Legal Environment of Business (3)

* 12 toward the Ph.D.

69.400 Managerial Statistics (3)

10.442 (formerly 19.310) Introduction to Business Economics (3)

10.456 Principles of Management (3)

10.457 Quantitative Methods in Decision Making (3)

10.465 Business Finance I (3)

11.300 Marketing I (3)

In addition, students, particularly from other countries, whose total academic backgrounds are not considered adequate, will be required to take 10.481 Principles of Production (3), and/or 10.491 Personnel and Manpower Management (3), and/or 10.458 Business Policy (3).

SECOND YEAR ADVANCED REQUIREMENTS courses: Minimum of 30 credits in "500" and above courses, with an overall average of at least "B" in American University courses, including at least "B" average in elective field, and 6 credits of at least "B" in 10.756, 10.757, or 10.758. At least 24 credits, including Seminars meeting non-thesis option, must be taken in residence.

MANAGEMENT: 10.642 Managerial Economics (3); 10.656 Design of Organizations (3); 10.657 Planning—Programming—Budgeting (3); 10.756, 10.757 Seminars in Policy Formulation I and II (6); 10.758 Seminar in Human Relations I (3).

ELECTIVE FIELD: At least 12 credits in "500" or above courses, generally at least 6 credits in "600" or above courses including at least one Seminar.

Required Comprehensive Examination Fields 10.001 Management (core field); and one elective field from the following (or other interdisciplinary field approved by the Director of the M.B.A. Program) list of fields:

10.010 Accounting

10.030 Advertising

10.013 Banking and Financial Institution Management

10.014 Business Education

10.015 Business-Government Relations

10.037 Business Logistics

10.016 Business Statistics

10.033 Church Management

10.017 Financial Management (including Business and Corporation Finance)

10.019 Industrial (including Personnel) Psychology

10.20A Industrial Relations

10.021 Institutional Management (including Hospital Administration)

10.22A Insurance, Life

10.22B Insurance, Property and Casualty

— 10.023 International Business

10.024 Investment Analysis (including Investment Banking)

10.036 Land Planning and Use

10.035 Legal Aspects of Business

10.002 Managerial (Business) Economics

10.025 Marketing

10.20B Personnel Management In Business

10.018 Production (Industrial) Management

- 10.027 Public Relations in Business
- 10.034 Purchasing (including Procurement and Materials Management)
- 10.028 Real Estate
- 10.029 Retailing
- 10.032 Transportation (including Traffic Management)

NOTE: Candidates interested in *Technology of Management* as an elective field should consult the Director for the Center for Technology and Management.

To be eligible for the two Comprehensive Examinations, taken as a unit in a given semester, students must have completed satisfactorily all First Year Basic Requirements courses, been advanced to candidacy, have at least a "B" average in graduate studies, have approval of appropriate Program Directors, as well as the M.B.A. Director, and have completed or be in the final session of completing all required course credits. Separate applications must be made for advancement to candidacy and for admission to Comprehensive Examinations. (Deadline for latter is announced in calendar of respective Fall, Spring or Summer *Schedule of Classes Bulletin*.) Applications must be approved by Director of M.B.A. Program, stamped by Office of Student Accounts who will forward them to the Graduate Studies Office.

A candidate who fails to pass both Comprehensive Examinations as a unit may request permission to retake 10.001 Management and the same or another elective Field (if adequately prepared for the latter). He may be required to take additional course work to strengthen his background. *A candidate who fails twice is automatically dismissed from the School.*

Advancement to Candidacy Admission to graduate study does not automatically mean advancement to candidacy for the M.B.A. degree. Each is a separate step in the student's progress toward the degree.

At advancement, approval of the elective Comprehensive Field is sought and an appropriate form filed with the Director of the M.B.A. Program. Advanced standing for previous appropriate graduate study is officially granted at advancement.

Advancement to candidacy has *no connection with admission to the comprehensive examinations*. The candidate must apply for the latter (before the deadline dates—announced in the *Schedule of Classes Bulletin*) by filing the proper application form, and paying the required fee.

Students *may* apply for advancement to candidacy when they have completed the first 12 credits of Second Year Advanced Requirements courses (with an average of "B" or better) and have completed satisfactorily all First Year Basic Requirements. This application *must* be made no later than the completion of 18 credits of Second Year courses. If at this time a student's average is less than "B", he may be dismissed from the University. He may also be dismissed if the grade average falls below the minimum requirement at any time thereafter.

Statute of Limitations All degree requirements are expected to be completed within three years from the date of first enrollment in the degree program. If not completed within that period, the student must petition for readmission if

he wishes to continue. Students needing First Year Basic Requirements courses have available time period called for by the Statute of Limitations extended in the proportion that First Year course requirements bear to Second Year course requirements.

Counseling General inquiries and initial and general counseling are by the Director of the M.B.A. Program. Counseling for preparation for Comprehensive Examinations is available from the appropriate Program Director or his representative. Each student develops with his counselors an "M.B.A. Planning Record" which provides an overall schedule and indicates progress toward completing requirements.

Required Grade Performance To be eligible to receive the M.B.A. degree, the minimum grade point average required to maintain good standing in graduate study is 2.0 (on a 3.0 = A system) in *all* graduate courses attempted.

MODEL M.B.A. SCHEDULE

(for full-time students *without* advanced standing)

SESSION I (12-15 credits)

10.400 Use of Accounting Methods (3)
69.400 Managerial Statistics (3)
10.442 Introduction to Business Economics (3)
10.456 Principles of Management (3)
10.401 Legal Environment of Business (3)

SESSION II (15 credits)

11.300 Marketing I (3)
10.457 Quantitative Methods in Decision Making (3)
10.465 Business Finance I (3)
10.401 Legal Environment of Business (3) *or*, if taken in Session I,
10.642 Managerial Economics (3)
Course 1 in Elective Field (3):

SESSION III (12-15 credits)

10.756 Seminar in Policy Formulation I (3)
10.758 Seminar in Human Relations I (3)
Course 2 in Elective Field (3)
Course 3 in Elective Field (3)
10.642 Managerial Economics (3) (if not completed in Session II)
NOTE: Application for Advancement to Candidacy must be made on the completion of 12-18 credits of Second Year courses.

SESSION IV (12 credits)

10.657 Planning-Programming-Budgeting (3)
10.757 Seminar in Policy Formulation II (3)
10.656 Design of Organizations (3)
Course 4 (Seminar) in Elective Field (3)

NOTE: Comprehensive Examinations (offered each Fall, Spring, and Summer) may be taken this Session by very well prepared candidates. Others should take them in the next Session, utilizing the time interval for thorough preparation.

Master of Science in Real Estate and Urban Development Planning

To meet the rapidly growing and great need for specialists in Real Estate and Urban Development Planning, the School is planning a new graduate degree beginning with Fall 1969.

Development Planning is the unifying theme for the various disciplines which relate to land use decisions. Most decision makers in real estate and most decision makers who regulate land uses currently lack formal education in this emerging field of specialization. To strengthen their competence and to provide a supply of well educated men and women to deal with the urban problems which have emerged from the misuse of human and real estate resources, this degree is being established. For further information, consult the Real Estate and Land Planning Program.

Doctor of Philosophy in Business Administration and Business Administration: Technology of Management

The growth in size and complexity of the American economy, the serious challenges, national and international, to American business and American society, and the need to face new and unprecedented problems are creating rapidly increasing demands for executives and business educators whose depth of education and breadth of outlook match their expanding tasks and responsibilities. These demands, currently and for the foreseeable future, are far outrunning the supply of operating executives, staff and advisory personnel, research specialists, scholars, and educators with such qualifications. Thus, both the need and the opportunities are now greater than ever before.

The School's Ph.D. in Business Administration represents that highest level of performance in creative scholarship. It tests the candidate's critical and analytical ability together with his broad, integrated background in his specialized fields. Thus, it represents a major personal, professional, and academic attainment.

Ph.D. candidates are carefully selected and thoroughly tested at every stage of their programs. Most of those enrolled have already achieved major positions in business, government, the military, and institutions of higher education in this country and overseas.

The Ph.D. in Business Administration: (1) strengthens and broadens the professional ability of administrators; and (2) prepares candidates with the highest standards of research and scholarship for careers as professional business educators and as research and staff specialists.

It requires high level competence in Management, Managerial (Business) Economics, and two other elective fields (in which Comprehensive Examinations are required). It stresses development of a philosophy of administration and a frame of reference derived from the social sciences and the quantitative approach, within which administration is understood and may be practiced. The curriculum, while building on the M.B.A. foundation, is broader and deeper.

**Course and Seminar
Requirements**

Candidates for doctoral degrees are required to take a minimum of 66 credits in graduate courses and seminars (plus 6 credits of Dissertation Seminar) with at least a "B" average.

BASIC REQUIREMENTS COURSES: All FIRST YEAR BASIC REQUIREMENTS M.B.A. courses are required. Requirements may be met by previous satisfactory completion, by passing *Waiver Examinations* (see page 259), or by passing such courses as part of the Ph.D. Program.

TOOLS OF RESEARCH: Accounting and Statistics are required (unless a foreign language or mathematics is approved partially in lieu of statistics). Non-language tools may be satisfied by examination or by certification based on satisfactory completion of appropriate courses. Candidates must complete both Tools before advancement to candidacy.

MANAGEMENT:

- 10.656 Design of Organizations (3)
- 10.657 Planning-Programming-Budgeting (3)
- 10.756, 10.757 Seminars in Policy Formulation and Administration (6)
- 10.758 Seminar in Human Relations I (3)

MANAGERIAL (BUSINESS) ECONOMICS:

- 10.542 Foundations of Business Forecasting (3)
- 10.642 Managerial Economics (3)
- 10.643 Managerial Analysis (3)
- 10.742 Seminar in Managerial Analysis (3)
- 10.743 Doctoral Seminar in Managerial Analysis Literature (3)

DISSERTATION SEMINAR: (6)

ELECTIVE COURSES: Balance of required credits in "500" and above courses, generally including at least two Seminars and, where offered the Doctoral Literature Seminar in each elective Field. At least 54 of the (Note: All the above and other appropriate courses satisfactorily completed for the M.B.A. may be applied to the Ph.D. requirements.)

**Required Comprehensive
Examination Fields**

WRITTEN COMPREHENSIVE EXAMINATIONS:

- 11.001 Management
- 11.002 Managerial (Business) Economics, and two elective fields (one of which may be outside of Business Administration, with approval of Director of Doctoral Programs.

Elective Fields

- 11.030 Accounting
- 11.032 Business-Government Relations
- 11.034 Business Finance
- 11.036 Industrial Relations & Personnel Management
- 11.038 International Business
- 11.040 Marketing
- 11.042 Production (Industrial) Management
- 11.044 Public Relations in Business
- 11.046 Real Estate
- 11.048 Transportation & Physical Distribution
- 11.050 Computer Systems
- 11.052 Operations Research
- 11.054 Research & Development Management
- 11.056 Systems for Management Information
- 11.058 Systems for Scientific & Technical Information
- 11.065 Church Management

Note: Doctoral candidates wishing to earn the degree of *Ph.D. in Business Administration: Technology of Management*, select two fields from those sequences. See page 316 for further information.

Separate applications must be made for advancement and for admission to Comprehensives. Applications for latter must be signed by Associate Dean, Ph.D. Program, stamped by Office of Student Accounts who forwards them to the office of Dean of Graduate Studies not later than the final dates listed in the respective Fall or Spring *Schedule of Classes Bulletin*. See also page 39.

Dissertation Requirements Candidates for doctoral degrees are required to successfully defend at an oral examination a dissertation approved by the Dissertation Advisory Committee as reflecting an original contribution to the established body of knowledge in the selected field.

Advancement to Candidacy Admission to a doctoral degree program does not automatically mean advancement to candidacy for a doctoral degree. Each is a separate step, and advancement is a discretionary act; various requirements may be set up in the best judgment of the School.

The student proposes his elective comprehensive fields in filing his application for advancement to candidacy.

Doctoral degree students who have completed 30 credits of graduate work, including the Master's program if this degree has been secured, and at least 15 additional credits in residence at the University, *may* apply for advancement to candidacy if their grade average in all graduate work taken at the University is at least "B". Application *must* be made not later than the end of the semester in which 18 credits of graduate work will have been completed in residence at the University, subsequent to admission to the doctoral program. If a student is ineligible for advancement at that time, his work at the University may be terminated. It may also be terminated if the grade average falls below the minimum requirement at any time thereafter.

If the Master's degree has been received at the University, a doctoral degree student *may* apply for advancement to candidacy after completing 12 graduate credits beyond the Master's degree but *must* apply no later than the end of the semester in which 18 credits of graduate work will have been completed beyond the Master's degree.

Transfer credit for prior work taken at other institutions is usually granted at the time of advancement to candidacy. In order to be transferred, the credits earned elsewhere must be graduate level courses taken after the student received the Bachelor's degree, and they must be judged appropriate to the student's degree program.

Statute of Limitations All degree requirements are expected to be completed within five years from date of first enrollment as a doctoral student (if the student entered with a Master's degree). If not completed, the student must petition for readmission if he wishes to continue. Students needing First Year BASIC REQUIREMENTS M.B.A. courses have time period called for by Statute of Limitations extended in the proportion that these course requirements bear to graduate credit requirements.

TECHNOLOGY AND MANAGEMENT

The Center for Technology and Administration provides a University-wide vehicle for the study of the effect of the emerging technological revolution on the administrative process. This predominantly graduate program has grown steadily, and now includes Computer Systems, Operations Research, Management Information Systems, Scientific and Technical Information Systems, and Research and Development Management as fields of elective study available to students in the School of Business Administration as part of their degree programs.

In the last decade, business and governmental organization and activity have been affected with equal and similar force by revolutionary technological developments whose impact grows and changes at great speed and whose ultimate effect cannot yet be foreseen. The new instruments and methods for the handling of masses of information are a phenomenon of revolutionary magnitude. The information handling revolution has, in turn, led into a managerial revolution of major proportions. These dynamics of information and management are now worthy of, and require, the highest level of academic and professional attention. In this accordance of recognition to the subjects, the objective is the creation of academicians and truly professional technical managers who are masters of the full scope of institutional significance, not just technicians of communication with machines.

B.S. in B.A. For a major in COMPUTER SYSTEMS. See pages 316-317.

M.B.A. To combine MANAGEMENT (General Administration) and TECHNOLOGY OF MANAGEMENT, elect as comprehensive examination field 55.063, 55.064, 55.066, or 55.067. See pages 315-319.

Ph.D. in B.A.: Technology of Management To earn this degree which combines MANAGEMENT (General Administration), MANAGERIAL (BUSINESS) ECONOMICS, candidates select two comprehensive examination fields from 11.050-11.058 sequence. See pages 315-319.

COMPUTER SYSTEMS—Computers have an impact on every aspect of the emerging managerial technique of communication and control within an organization. It is not sufficient for the manager to rely on his staff for an understanding of the capabilities of the machine. He must have a grasp of the limitations of this powerful tool from a first-hand intimacy through a balanced academic program of concentration on the programming, design, and application of the instrument.

OPERATIONS RESEARCH—Operations Research is a new outlook and a new approach to the scientific solution of problems in Business Government, and Defense. The task of the Operations Research scientist is to study problems involving men, machines, money, and materials, and to provide management with the best solutions. Thus, the modern manager must be familiar with the language, concepts and tools of Operations Research and what is becoming known as "Management Sciences" in order to know where, when, and how they can be applied.

SCIENTIFIC AND TECHNICAL INFORMATION SYSTEMS—For academic and professional specialization in those systems dealing with the broad spectrum of the intellectual and machine-processing of the products of scientific and technical research and development such as the journal article, the technical report, the patent, and the state-of-the-art review. Functions of the special library and technical information center are treated in detail, included such procedures as technical writing and editing, computerized techniques of publishing, abstracting, indexing, search strategy, etc. Advanced seminars on special topics, such as library automation, thesaurus construction, and data centers round out the curricular offerings in this rapidly-developing area.

The Washington region, the national center of information activities, presents a unique opportunity for field trips, site visits, and similar practical application of course work.

MANAGEMENT INFORMATION SYSTEMS—For academic and professional specialization in those systems which: (a) perform the administrative processes of business or governmental action; (b) alter and manipulate information within the storage subsystem to produce information and analysis for managerial planning, decision, and control; (c) produce the managerial decision by interrelation of information and pre-determined criteria; or (d) execute such decision by pre-programmed initiation, performance, and control of the operational action involved. This is the spectrum of the administrative, managerial, and performance systems of governmental and non-governmental institutions.

RESEARCH AND DEVELOPMENT MANAGEMENT—For academic and professional specialization in the formulation of research and development programs and the directing, control, and evaluation of their execution. The spectrum of offered managerial technology is, of course, intimately related to technical and scientific missions, be they in the business or governmental milieu. This program is especially designed to develop initially or further the professional competence of those people who are or expect to be responsibly concerned with the management of research and development projects.

NOTE: For course descriptions, see **CENTER FOR TECHNOLOGY AND ADMINISTRATION Curriculum** (pages 319 to 324).

SPECIAL PROGRAMS

Practicing lawyers and law schools increasingly recommend business administration and accounting as advantageous backgrounds or supplements for legal studies. The lawyer with a business or accounting background can more effectively resolve the problems of businessmen-clients, is far better qualified for such specializations as corporation or tax law, and is better equipped to move to positions of managerial responsibility.

M.B.A.-LL.B.: Work beyond the first year at accredited law schools may be given graduate credit if both are relevant to a degree program and earned with at least "B" grades. University residence and specific course requirements must be fully met. Qualified graduates of the University's Washington College of Law receive advanced standing of

12 credits, toward the 30, of courses at the "500" and higher level. Graduates of other accredited law schools transfer 6 credits of "B" or better toward the 30. Both also receive credit for 10.401 Legal Environment of Business. Either *Legal Aspects of Business* or *Business-Government Relations* generally serves as the elective Comprehensive Examination under this special Program.

Attorneys thus supplement legal backgrounds with a thorough education in business fundamentals (M.B.A. First Year Courses), in advanced study in Management (the area of administration), and in the interrelations of law and business. By building on their legal educations, they earn the M.B.A. in a shorter time and are better prepared to manage legal firms or departments, to deal with business operations and organizations at a high management level, to qualify for high managerial positions themselves, and to teach Business Law in schools of business administration.

Preparation For Careers in the Foreign Service

To meet the increasing need for Foreign Service Officers with a thorough education in business, the Junior Foreign Service Officer Examination now includes in Part 2 of the General Background test, *Option B: Management and Business Administration*. This calls for an understanding of the more advanced concepts of executive management, business administration, foreign commerce, and international marketing.

The School recommends as effective educational preparation the B.S. in B.A., with a major in International Business, and as electives a foreign language. Students preferring to major in Finance, Marketing, or Industrial Relations and Personnel Management should use electives for International Business and a foreign language.

The M.B.A. provides a higher-level education in executive management. International Business or other relevant fields may be used as the elective comprehensive examination.

Career Opportunities in the Bureau of International Commerce

International Business, Marketing, and Finance, with electives selected as in the Foreign Service Officer examination (see above), are recommended for educational preparation for appointments as Business or Trade Specialists. The Bureau uses the Federal Service Entrance Examination (FSEE) to fill most initial appointments. For further information, write Bureau's Personnel Division (Washington, D. C. 20230).

Certificate Programs

EXECUTIVE CERTIFICATE PROGRAM—This program is for mature men and women with substantial executive experience who have not had an opportunity to earn a Bachelor's degree, do not meet requirements for direct admission to M.B.A., and have not had more than 30 hours of previous college study. Application is by letter (accompanied by complete resumé of education and experience). Admission is highly selective, limited to those: (a) at least 35 years old; (b) with a minimum of five years of executive experience; (c) recommended by head of business firm or government agency or commanding officer, if in military; (d) earning satisfactory scores on Admission Test for Graduate Study in Business (see page 000); and (e) with experience equivalent to an undergraduate business major and which indicates ability to complete satisfactorily advanced study.

Executive Certificates will be awarded in areas of M.B.A. Comprehensive Fields (see page 000), where applicant completes with at least "B" average 12 credits in M.B.A. First Year Basic Requirements courses (unless waived on basis of examinations), 12 credits in area of specialization, and 6 credits from the Management area. An applicant may receive more than one *Executive Certificate* by completing with at least "B" average an additional 6 credits of First Year or other prerequisites (unless waived by examination) and 12 credits in the additional area of specialization for each Certificate beyond the first. (Where prerequisites are waived, appropriate advanced courses may be added to earn total required number of hours. Up to six credits of basic courses in area of specialization when prerequisite to registration for advanced courses, may be substituted for M.B.A. First Year courses.) Minimum residence requirement is 18 credits.

Students may *not* be concurrently enrolled in a degree program nor is the Executive Certificate Program open to those already holding a Bachelor's degree. If a registrant later wishes to earn the B.S.B.A.

CERTIFICATE IN ACCOUNTING—This certificate is basically for holders of Bachelor's degree in a field other than accounting who wish to become professional accountants and qualify for the C.P.A. Examination. Appropriate courses satisfactorily completed in the undergraduate program or in previous study may be counted toward requirements, subject to minimum residence of 18 credits. (Credits taken toward undergraduate and or graduate degrees at The American University count toward this residence requirement.) Students admitted to M.B.A. or Ph.D. in Business Administration at The American University may also receive advanced standing for appropriate courses satisfactorily completed in this program, thereby meeting a significant portion of the requirements for those degrees. Students *may* be concurrently enrolled in a degree program.

The Certificate in Accounting is awarded upon completion, with at least "C" grades, of courses in Accounting, Taxation, and Business Law prescribed by Director of the Accounting Program. Courses will be based on previous education and background and requirements of the C.P.A. Examination. In all cases, a minimum of 36 credits (including transfer credits) will be required.

PROFESSIONAL CERTIFICATE IN CHURCH MANAGEMENT—This certificate is awarded on successful completion of the following intensive program of academic study, related work experience, and applied research. Classes are scheduled to permit studies at a high level of scholastic achievement without extensive leave from regular duties. Graduates of this program are members of The American University Alumni Association.

Two patterns of learning experiences, the "Basic Requirements Studies" and the "Concentration Area," together totalling 48-60 credits (semester hours), are required of all candidates.

The Basic Requirements Studies require 42 credits with at least "C" grades. This minimum must include 6 credits in composition and reading, 6 in religion, and 3 in each of the following: general psychology, introduction of sociology, basic statistics, introductory accounting, prin-

ciples of management, and personal finance. Additional credits needed to meet the minimum of 42 may be in courses of the student's choice.

The Concentration Area requires 6-18 credits in Church Management with at least an overall "B" average and no grade lower than "C." Students are required to achieve depth, breadth, and significant professional competence by completing satisfactorily:

(1) Either 3 credits or an approved 36-hour Institute (3 non-credit units) in each of at least four of the six functional areas of major emphasis in Church Management (program development, financial resources, physical facilities, office services, staff personnel, program promotion);

(2) A 6-credit internship (courses 12.552 and 12.553) in which, among other accomplishments, a significant practical research project is completed and reported as if for publication; and

(3) A General Examination, written and oral, designed to assist in evaluating extent of knowledge and skill in the candidate's choice of any four of the preceding six areas of major emphasis.

Students may apply for advancement to candidacy for the certificate when they have completed the Basic Requirements Studies, which may also be met by transfer of approved satisfactorily completed courses from other institutions of higher education or by passing waiver examinations.

Business degree candidates at The American University may use appropriate courses satisfactorily completed in this certificate program to the extent permitted by their degree requirements.

Since the concentration area requires graduate standards of performance, graduate students in Business Administration may work concurrently toward both degree and the certificate.

CERTIFICATE IN REAL ESTATE—Growing complexities of operations and strong pressures for raising standards of practice to professional levels place an ever increasing premium upon additional formal education for practitioners. The Certificate Program goes beyond the taking of individual courses. It provides an integrated "package" which attests to successful completion of an educational foundation for professional competence.

Part I: Business Administration Courses

10.400 Use of Accounting Methods (3)*

10.442 Introduction to Managerial Economics (3)**

10.465 Business Finance I (3)

10.491 Personnel and Manpower Management (3)

11.300 Marketing I (3)

Part II: Real Estate, Construction Management, and Land Planning Courses

11.584 Mortgage Banking (3); either 11.476 Introduction to Real Estate Investment (3) or 31.504 Institute on Real Estate Appraisal I

* Students without bachelor's degree substitute 10.306 Introductory Accounting I (3) and 10.307 Introductory Accounting II (3).

** Students without bachelor's degree substitute 19.100 Introduction to Economics I (3) and 19.101 Introduction to Economics II (3).

(3); either 11.576 Real Estate Transactions (3) or 11.578 Real Estate Law (3); and four other real estate courses.

Subject to at least 21 credits taken in residence, transfer credit may be granted for equivalent courses previously completed satisfactorily at other accredited institutions in the certificate program.

All courses satisfactorily completed in this Certificate Program may be applied to degree requirements for students admitted to degree status. Students may work concurrently toward a degree and the Certificate, provided at least 6 credits are used exclusively for the Certificate requirements.

Certificate Programs are offered in conjunction with Center for Technology and Administration and through College of Continuing Education.

In the area of Technology of Management, Certificate Programs are offered in COMPUTER SYSTEMS, OPERATIONS RESEARCH, MANAGEMENT INFORMATION SYSTEMS, and RESEARCH AND DEVELOPMENT MANAGEMENT. Almost all credits count toward Business Administration degrees for those admitted to degree status. A brochure is available upon request.

Institutes The School periodically offers specialized professional Institutes, primarily for practicing businessmen. Planned with leading practitioners and, generally, appropriate trade and professional associations, they are part of the School's "Continuing Education" and offer short, intensive instruction on a time schedule permitting leave from regular duties. They are an important means of strengthening professional qualifications and of counteracting executive "obsolescence." See *Institutes* under course listings.

CENTERS

Center for International Business American private enterprise has a great and growing stake in the world economy. Even the most sheltered American businesses are no longer immune to world conditions. Business urgently needs to strengthen its competence to meet new opportunities and responsibilities and to develop and support means for greater participation of private enterprise in overseas international development and economic aid programs.

Recognizing the sharply increasing, urgent need for research and education in this field, the University through the School of Business Administration has established a *Center for International Business* to provide the necessary background for: (1) Americans seeking careers at home and/or abroad, in the growing number of firms seeking foreign business; in the Foreign Service; and in other governmental and international agencies where public services are closely associated with business abroad; and (2) students from other countries seeking proficiency in business with emphasis on educational preparation for developing business operations for foreign or domestic firms in their own countries and for their governments. Advanced programs are also being planned for those already in international business who wish to strengthen backgrounds and increase competence in this complex area.

International Business Research Laboratory A unique facility for research established by a grant from the late Mrs. Alan M. Scaife, the *International Business Research Laboratory* comprises business documents and artifacts organized to answer practical business questions, with information made readily available by modern data-handling technology. Equipment and information are being contributed by individual donors, firms, and governments. Additional contributions are welcomed to increase the scope and usefulness of the Laboratory.

American and foreign company executives and government officials as well as students are welcome to utilize the Laboratory.

Center For Technology and Administration The Center for Technology and Administration, established in the School of Government and Public Administration in 1958 and made a joint instrumentality of that School and the School of Business Administration in 1964, now administers curricula and research in *The Technology of Management* on a University-wide basis.

Center For Transportation and Logistics Research Increased need for and growing recognition of the value of research led the School to establish a *Center for Transportation and Logistics Research* which conducts research projects on a contract basis in transportation, traffic management, physical distribution, and business logistics.

The Center seeks additional funds for research scholarships for graduate students and a reference service for visiting scholars. Foundations and individuals impressed by the many unique advantages arising from the School's leadership and pioneering in Transportation education and the abundant and largely unexploited research resources of the nation's capital have made possible establishment of the Center.

Center for Church Management An extensive program of education for leadership in obtaining and using financial, physical, and human resources for religious and related non-profit organizations is conducted by the Center for Church Management. The American University is the nation's only institution of higher education with a comprehensive program of graduate studies in this field.

This unique Center exists for a three-fold purpose of (1) educating men and women for effective stewardship of church management responsibilities, (2) making available an educational basis for strengthening the role of pastors as chief administrators, and (3) offering advanced education for religious career service as professional directors and ministers of management.

FOUR BASIC CONVICTIONS or major premises guide the development, operation, and promotion of the Center's programs:

First, if churches are to accomplish their distinctive purposes, their approaches to management must be at least as effective as those of other organizations in today's complex society.

Second, some of the principles and processes of management that are applied successfully in business, industry, education, and government may be used in churches.

Third, since churches are service-rendering rather than profit-making, and because of the uniqueness of their purposes and objectives, some of their approaches to management must be different from those of commercial enterprises and other secular organizations.

Fourth, the differences resulting from 3 above must be clearly identified thoroughly understood, and constantly respected.

Programs provide both (1) basic information and guidance for pastors and laymen seeking practical assistance in performing church administrative functions, and (2) continuing education for in-service growth of administrators in churches and related non-profit organizations.

Program objectives are pursued through credit courses, non-credit Institutes, faculty-supervised internships, field studies, professional consultation, and publication services.

The Professional Certificate in Church Management is awarded in response to the growing demand for formal academic recognition and evaluation of student achievement of an educational foundation for professional administrative service to religious organizations.*

University degree programs are provided for qualified students. Church Management is an advanced field of concentration and Comprehensive Examination for the Master of Business Administration degree, the Doctor of Philosophy in Business Administration, and where approved, for other graduate degrees.

Wesley Theological Seminary students may take Church Management courses for which they are qualified and which are appropriate to their degree programs, without additional cost, subject to approval of the student's faculty adviser and the Director, Center for Church Management.

This Annual Conference brings together in the audience and on the rostrum key executives from business and government to help determine jointly the responsibilities of the public and private sectors in maximizing their contributions to a healthy economy. It provides a unique, non-political forum for business to tell its story; for business executives to discuss problems with government officials and to acquaint government people with how business actually operates; for government to explore with business its concepts of regulation and its appropriate activities. The Conference makes possible a two-way "Dialogue," a common meeting ground for free and constructive discussion and analysis to help our business system better serve not only the special interests of the producer, distributor, and consumer, but also the general interest of all the people and of the nation.

The next Annual Conference will be held in the spring. For program and further details, write Director, Washington Conference on Business-Government Relations, The American University, Washington, D.C. 20016.

Hoyt Institute The Homer Hoyt Institute, a non-profit organization conducting research and related activities in urban growth and development, real estate economics, and land planning and use, serves as the research arm of the Real Estate, Construction Management, and Land Planning Program. Its services are available to private firms and organizations and to all governmental agencies. Chairman of the Board of Directors of the Institute is Dr. Homer Hoyt, noted land planner, housing and real estate economist, and author.

* See the previous page for the *Certificate in Church Management*.

Admission is available to members of all religious faiths and denominations and to both non-degree and degree students.

NATHAN A. BAILEY ANNUAL LECTURE IN CHURCH MANAGEMENT—Another innovation in its field this lectureship was launched in November 1966. Started by an initial gift from James E. McKinney, business manager of the Arlington, Va., Methodist Church, it, at Mr. McKinney's request, was established in the name of and in honor of Dean Nathan A. Baily. The Lectures as delivered, or in expanded form, are to be published by arrangement with the Center for Church Management.

**Center for
Study of
Private Enterprise**

As an expansion of the Business-Government Relations Program, this Center will study the changing roles of the private and the public sectors in our society with particular concern for the proper role of each in the social, political and economic problem areas. It consists of five divisions: A Teaching Division responsible for M.B.A. and Ph.D. study in Business-Government Relations and Public Relations in Business; a Research Division to develop and conduct research into the changing role of private enterprise; a Publications Division; an Executive Development Division; and a Special Projects Division.

The Center will work closely with business and government leaders throughout the country in both curriculum development and in research projects.

THE AMERICAN UNIVERSITY LECTURES IN BUSINESS-GOVERNMENT RELATIONS

Made possible through a grant from the Hill and Knowlton Company, they present outstanding government leaders, business executives, and academic scholars. These lectures explore the main problem areas in business-government relations and offer guidance in improving them. The lectures are published in book form.

The 1967 lecturers were Secretary of Commerce John T. Connor; Dean Courtney C. Brown of the Graduate School of Business, Columbia University; and Elisha B. Gray II, Chairman of the Board, Whirlpool Corp. 1968 Lecturers were Dr. Charles H. Malik, former President of the General Assembly of the United Nations, and Daniel Parker, Chairman of the Parker Pen Co. and of the National Association of Manufacturers.

**Corporate
Executive-in-
Residence**

Contributions from several American corporations have enabled the Business-Government Relations Program to establish a Corporate executive in Residence program. Each semester a different executive, active or retired with outstanding experience in one of the areas of business-government relations—administrative law, economics, public affairs, public relations—is brought to Campus to counsel students, lecture to classes, lead discussions, and assist the Program Director in planning future academic developments. The first such Executive, in Spring 1968, was Mr. Harold Brayman, for twenty-one years Director of Public Relations for the du Pont Company, author of *Corporate Management in a World of Politics*, and one of the "Deans" of the Public Relations field.

SCHOLARSHIPS, INTERNSHIPS, AND LOANS

University Undergraduate Scholarships See page 17 for information, credentials, final application dates. *School of Business Administration students may apply for both University and School scholarships; they are not restricted to the latter.*

Transfer Student Eligibility Transfer students other than junior college graduates are not eligible for scholarships during their first year, but are eligible for consideration the second year if their academic records meet required standards.

School of Business Administration Undergraduate Scholarships KAY JEWELRY STORES SCHOLARSHIPS: 5 Scholarships of \$1,000 plus possibility of paid employment. Open to full-time juniors, seniors, and graduate students. If qualified, holders will receive junior executive or executive position offer upon graduation.

ADVERTISING CLUB OF WASHINGTON SCHOLARSHIP: \$500. To demonstrate interest of Advertising practitioners in students of Business Administration and Marketing and to aid the undergraduate or graduate student, male or female, preparing for a career in Advertising.

CHEVY CHASE (MD.) CENTER MERCHANTS ASSOCIATION SCHOLARSHIPS: \$400, for men or women. Retailing or Marketing majors preferred.

ASSOCIATION OF INDUSTRIAL ADVERTISERS: \$250 to Marketing Major stressing Advertising, entering Senior Year in Fall 1968. Recipient must prepare paper on some phase of industrial advertising. American University was selected as one of small group of schools offering strong educational foundation for careers in Advertising.

NATIONAL ASSOCIATION OF HOME BUILDERS FOUNDATION SCHOLARSHIPS Scholarships and research assistance of up to \$1,000 for students in the School preparing for careers in real estate or home building.

MORTON J. LUCHS AND FRANK J. LUCHS SCHOLARSHIPS: Frank J. Luchs, while Executive Vice-President and Treasurer of Shannon & Luchs, Realtors, established a \$700 a year scholarship in memory of his father, a pioneer leader in Washington real estate. After his own untimely death, friends contributed funds to be used as a supplementary or separate scholarship.

separate scholarship. Full-time juniors, seniors, or graduate students may apply. Holders may, when feasible, intern at Shannon & Luchs.

EBNER R. DUNCAN MEMORIAL SCHOLARSHIP OF THE NORTHERN VIRGINIA BOARD OF REALTORS: \$500 per year for two years. For full-time junior, senior, or graduate Real Estate student residing in Northern Virginia.

DENICE MORTGAGE BANKING SCHOLARSHIP AWARD: Anthony G. Denice, President of A. G. Denice, Inc., Mortgage Bankers, has established this Annual Award for the student completing Mortgage Banking who is judged the most worthy recipient by the School. The winner will also, if feasible, intern with the firm.

EDWARD J. KYLE SCHOLARSHIPS: Each fall, District-Realty Title Insurance Company gives in memory of the late Mr. Kyle—a leader in the Washington Real Estate Community—a scholarship covering tuition for one Real Estate course to the outstanding student in 11.577 Broker-

age Administration. In spring, a similar scholarship is given to the outstanding student in 11.576 Real Estate Transactions. Full-time and part-time, undergraduate and graduate, degree and non-degree students are eligible.

FEDERAL GOVERNMENT ACCOUNTANTS ASSOCIATION SCHOLARSHIP: \$500 scholarship to an outstanding full-time student of Accounting in one of the accredited metropolitan Washington universities. Selection based on academic performance, campus and community activities, personal qualifications.

D.C. INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS (AND WOMEN'S AUXILIARY) SCHOLARSHIP: \$200 for outstanding full-time undergraduate Accounting major who has completed at least his sophomore year.

WOMEN'S ACCOUNTING SOCIETY, D. C. CHAPTER, SCHOLARSHIP: \$100 for outstanding woman Accounting student, graduate or undergraduate, full-time or part-time.

BURKE, LANDSBERG, & GERBER SCHOLARSHIP: \$250 for senior majoring in Accounting. May also include, when feasible, part-time internship with firm.

CREDIT MANAGEMENT ASSOCIATION OF GREATER WASHINGTON MEMORIAL SCHOLARSHIP: \$250. Preference to employees of member firms and to students preparing for careers in credit management, finance, or business administration.

JACOB A. KAMEROW SCHOLARSHIP: \$200 for outstanding student, graduate or undergraduate, full-time or part-time, in memory of late Jacob A. Kamerow, a leader in insurance, civic, and religious activities.

NORTHERN VIRGINIA HOUSEHOLD GOODS CARRIERS ASSOCIATION: \$500 for major in Transportation and Logistics.

COUNCIL OF CHURCHES OF GREATER WASHINGTON SCHOLARSHIPS: Several "entrance" scholarships, each covering half tuition for courses in church management, "to help needy and worthy persons obtain an educational basis for becoming better stewards of church management responsibilities." Awarded each session on interfaith and international bases to (1) theological seminary students, (2) pastors and lay officers of mission churches, and (3) young-clergy staff of larger congregations. May include, when feasible, part-time paid internship with the Council. Graduate or undergraduate, full-time or part-time, degree or non-degree students are eligible.

CLYDE W. HUMPHREY SCHOLARSHIPS: Established by the Church Management Chapter of The American University Alumni Association in honor of the founder and Director of the Center for Church Management. Half-tuition scholarships offered each session to degree or non-degree students, full-time or part-time, graduate or undergraduate.

WESLEY MEN'S BIBLE CLASS SCHOLARSHIPS: Awards cover half tuition for one or more courses in Church Management. Funds are provided by the Wesley Men's Bible Class of Clarendon Methodist Church in Arlington, Virginia. Available each session on interfaith and international bases "to (1) theological seminary students, and (2) young pastors wishing basic information and guidance in systematic ap-

proaches to church administrative functions." Open to full-time or part-time, undergraduate or graduate, degree or non-degree students.

INSTITUTE OF LIFE INSURANCE SCHOLARSHIPS AND FELLOWSHIPS: Stipends granted from funds contributed by the Institute to make available to religious leaders systematic instruction designed (1) to help them plan their own family financial affairs and (2) to equip them for teaching groups and counseling individuals who have problems involving family finance. For degree or non-degree students, full-time or part-time graduate or undergraduate.

**University Graduate
Fellowships
and Scholarships**

See page 17 for information, credentials, final application dates. Since consideration depends on prior admission, application as much in advance of official deadlines as possible is recommended.

**School of Business
Administration Graduate
Fellowships and
Scholarships**

In addition to *University Awards*, School of Business Administration full-time students have available:

WHIRLPOOL FELLOWSHIPS IN BUSINESS-GOVERNMENT RELATIONS: Two at \$4,500. Established by Whirlpool Corporation, Benton Harbor, Michigan.

AMPAC FELLOWSHIP IN BUSINESS-GOVERNMENT RELATIONS: \$4,500. Established by American Medical Association Political Action Committee.

SOUTHERN RAILROAD FELLOWSHIP IN TRANSPORTATION: \$2,000 plus tuition for four courses per session—for assisting in conduct of School's Transportation Institutes and other appropriate duties.

ACCOUNTING, MARKETING, INTERNATIONAL BUSINESS FELLOWSHIPS: \$2,000 each plus tuition for four courses per session—appropriate duties.

GRADUATE ADMINISTRATIVE ASSISTANT: \$2,000 plus tuition for four courses per session. Open to students in any field of Business Administration.

AARON AND CECILE GOLDMAN FOUNDATION SCHOLARSHIP: \$1,000 for a superior Howard University graduate studying full-time for the M.B.A.

ROBERT E. WILSON MEMORIAL SCHOLARSHIP: In memory of late distinguished business and government executive and member of School's Business Advisory Board. \$500 to outstanding American University M.B.A. candidates going on to the School's Ph.D. in Business Administration program.

Graduate students are also eligible for Kay Jewelry, Advertising Club of Washington, Chevy Chase Merchants Association, Northern Virginia Board of Realtors, National Association of Home Builders, Luchs, Denice, Woman's Accounting Society, Kamerow, Credit Management Association, Northern Virginia Household Goods Carriers Association, and Church Management Scholarships described under Undergraduate Scholarships. Some of these are also available for part-time students. A separate brochure is available upon request.

Doctoral candidates may also apply for Fellowships from organizations such as the Ford Foundation, Richard D. Irwin Foundation, American Bankers Association (Harold Stonier Fellowship), and American Accounting Association.

These Work-Scholarships supplement classroom education by providing valuable experience, usually of a research nature, in government agencies, business firms, and associations. The student interns for 20 hours per week at prevailing compensation for such employment, and carries nine hours of course work. He receives careful supervision and appraisal of his professional strengths and weaknesses. Full-time summer employment is frequently available.

Internships are currently available in the Business-Government Relations, Manpower and Personnel Management, Marketing, Real Estate and Land Planning, and Transportation and Logistics Programs. For further information, write directly to the appropriate Program Director.

Student Counselorships Provide room and board to both men and women graduate students. Apply to Dean of Students no later than March 1.

Loan Programs For University Loans, National Defense Education Act Loans, Methodist Student, and other University-wide Funds, see page 17.

The Anna Mary Mann** Memorial Loan Fund provides loans for women students, with preference to those in the School of Business Administration and the School of International Service.

To meet emergencies which cannot be handled through University Loan Funds, a special School of Business Administration Student Loan Fund has been established in honor of *William M. and Rebecca Sachs*.

Thanks to the *Sachs Loan Fund*, the School also participates in the *United Student Aid Program*. This national nonprofit loan program permits full-time undergraduate students who have completed satisfactorily the freshman year to borrow up to \$1,000 per year and graduate students up to \$2,000 per year. No student may borrow more than \$4,000. Interest is 6% simple. Payments of interest and principal begin the fifth month after graduation and may be anticipated. In case of drop-outs, payments begin at once.

Students need endorsement by M.B.A., or Ph.D. Program, for consideration by the Director of Financial Aid who officially recommends the loan, after consultation with the student. Loan is negotiated at the student's home town bank on the student's own signature.

The Weinberg Student Loan Fund, established by Mr. and Mrs. J. A. Weinberg, Jr., is available to full-time undergraduate students in either the School of Business Administration and in the School of Nursing who have completed satisfactorily at least one year of study, who have a sincere desire for collegiate education, but whose continuance in their chosen fields are jeopardized by financial problems. *Subject to total lending capacity, therefore, no qualified student need be deprived of the opportunity to earn his degree in the School.*

General Information

- Send applications for *University Awards* to Director of Financial Aid for Undergraduate Scholarships or to Assistant Dean for Administration, School of Business Administration, for Graduate Fellowships and Scholarships. Separate brochures describe each category.

- Applications for *School of Business Administration Awards* should be sent to Assistant Dean for Administration, School of Business Administration.

* Also available to part-time students.

** B.S. in Business Administration, 1959.

- All School Awards may be supplemented by limited loans.
- As long as funds remain available, Fellowships and Scholarships may be renewed on the basis of successful academic performance.

SCHOOL OF BUSINESS ACADEMIC REGULATIONS

See also pages 29 and 38 and following for University Regulations which preclude the following.

Fulfillment of Academic Requirements

The student's primary obligation is to pursue conscientiously his academic objective and to complete as effectively as possible his academic assignments.

Professional education calls for long hours of hard work, mastery of subject matter, and ability to use it in specific situations; disciplined, inquiring, and observing minds; and independent research and analysis. Studies must therefore receive the highest priority of time and effort—they represent probably the most important personal and professional investment the student can make.

Students must supplement class work by doing considerable outside reading, written assignments, and study. Each student must carefully schedule his time so as to draw maximum profit from each course as well as from the curriculum as an integrated whole. To pursue a special interest or ability in one or a few courses at the cost of only minimum outside work in others will reduce the benefits of a carefully coordinated program and weaken the student's educational foundation and career preparation. Further, while extracurricular activities and part-time employment have many educational benefits for business students, they must remain secondary to academic studies.

Meeting Degree Requirements

While a large portion of faculty time is devoted to assisting the student to make proper program and career choices, the function of counselors is to help individuals help themselves. Selection of a major and choice of courses are among the most important decisions that each student makes during his university career. They cannot properly be delegated to anyone else. EACH STUDENT IS HELD RESPONSIBLE FOR THE PLANNING AND PURSUIT OF HIS EDUCATIONAL PROGRAM AND FOR MEETING DEGREE REQUIREMENTS. It is his responsibility to understand fully, and to comply with, all University and School regulations. Course sequence sheets for undergraduates and M.B.A. Planning Records are indispensable tools for doing this effectively.

Absences

Students are expected to practice the business principle that regular and punctual attendance at all classes is a primary obligation and that absences shall be only those absolutely necessary. They must still be justified to instructors with the student still responsible, even if excused, for making up and mastering work he missed.

Veterans and other students studying at government expense may be subject to the loss of educational benefits for excessive absences.

Use of Correct English A student whose written or spoken English in any course is unsatisfactory may be assigned supplementary work, without academic credit, or required to enroll for additional English courses.

Academic Dismissal Undergraduates must maintain a 1.00 cumulative index (C average). Each academic record is evaluated at the end of each year of full-time study (or equivalent for part-time study). Those who at any time, however, do not meet minimum grade requirements may be dismissed at the School's discretion.

Graduate students must maintain a minimum 2.00 cumulative index (B average) in all graduate courses. Those who complete 18 graduate credits without the required index, or who drop below at any time thereafter, may be dismissed.

Students whose averages fall below good standing have the responsibility of taking the initiative in discussing their problems with faculty advisers and instructors. They will generally find it desirable to reduce their course load to permit more intensive concentration. Since students know their own averages, they should not delay taking remedial action until they receive formal warnings which are *not* required before dismissal.

Once dismissed, undergraduate must wait a year before they can apply for Re-Admission.

Students already enrolled in Summer Session at the University will generally be given until the end of the Session before official action is taken.

Academic Probation A freshman who fails to achieve a 1.00 index (C average) during his first two semesters (24-30 credit hours), but whose cumulative index is .750 or above, may be placed on academic probation for his second year at the discretion of the Assistant Dean, Undergraduate Program.

Freshmen should repeat any failed courses in the next semester. See page 31.

Honors

Dean's Honor List Undergraduates carrying a session schedule of 15 or more credits are placed on the Dean's Honor List for each session in which they earn an average of 2.5 (B+) or better. They are also guests of the School Faculty at a luncheon given each session to honor their achievement.

Honors Awards Each year, faculty and students join to honor students being recognized for excellence in studies and in campus activities. The President of the University generally presides at this Honors Convocation.

The School makes Awards at this Honors Convocation and at its Annual School Dinner, including:

MORRIS CAFRITZ MEMORIAL AWARD—to the student in first place on the Dean's Honor List for the preceding Spring Session.

JEROME W. ROWE MEMORIAL AWARD—to the student in first place on the Dean's Honor List for the preceding Fall Session.

JOSEPH I. JOLLES MEMORIAL AWARD—to student making outstanding contribution to Real Estate Program

C. C. GLOVER S.A.M. LEADERSHIP AWARD—to President of The American University student chapter of the Society for Advancement of Management

WALL STREET JOURNAL STUDENT ACHIEVEMENT AWARD—to outstanding Finance student

D. C. INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS AWARD—to student receiving the scholarship awarded by this organization

D. C. CHAPTER, WOMEN'S ACCOUNTING SOCIETY, AWARD—to student receiving the scholarship awarded by this organization

ERNEST CONNOLLY MEMORIAL AWARD, Washington Personnel Association—to outstanding student in Personnel Management

MARKETING STUDENT OF THE YEAR AWARD—to senior outstanding in scholarship and service to the Marketing Program

MELPAR, INC. AWARD—annual prize of \$100 for best paper on some aspect of use of computers for administrative purposes. All students in Technology of Management courses eligible.

STAFFORD H. CASSELL MEMORIAL AWARD—to the undergraduate best combining athletic and scholarship achievement. In memory of the late Vice-President of the University and long-term faculty member.

ANNUAL STUDENT ACHIEVEMENT AWARD OF WASHINGTON CHAPTER OF SOCIETY FOR ADVANCEMENT OF MANAGEMENT—to outstanding full-time senior majoring in a management field.

Honors Study Through the Lillian and Stanley I. Posner Foundation, the STANLEY I. POSNER MEMORIAL AWARD of \$200 is made to the graduating senior in the School with the highest overall academic average.

The School is currently developing an Honors Program for the Junior and Senior Years for superior undergraduates.

Master of Business Administration The M.B.A. is conferred *cum laude* for a graduate course index in residence of 2.7 or higher and at least two "Distinction" grades on Comprehensive Examination; *magna cum laude* for 2.8 or higher and at least three "Distinctions"; and *summa cum laude* for 2.9 or higher and four "Distinctions" (3.00 = A).

STUDENT ACTIVITIES IN S. B. A.

The extra-curricular program serves to enrich the student's experience—developing qualities of leadership and responsibility, strengthening ability to work with others, and encouraging growth of lasting friendships. Thus, student activities supplement the School's curriculum by providing working laboratories for preparing for careers in organizations. Just as business utilizes participation in professional and civic activities for developing younger executives as well as for rendering valuable service, so the business student can use the opportunities provided and help himself and his School simultaneously.

SOCIETY FOR ADVANCEMENT OF MANAGEMENT. Programs include round-table discussions, field trips, talks by business leaders, dinner meetings

with the Washington Senior Chapter, concentrating on management and administration. Two active sub-committees: Investment Committee which manages an actual portfolio of securities (the "Nathan A. Baily Investment Training Fund"), and Advertising and Public Relations Committee.

STUDENT MARKETING CLUB. Affiliated with the American Marketing Association. Members work closely with the Marketing Faculty on various projects to strengthen knowledge and experience in marketing.

PI SIGMA EPSILON. National professional Fraternity of Marketing educators; Sales executives: University students. Goals are a collegiate brotherhood of men interested in advancement of marketing and sales as a professional career; to promote improved methods and attitudes toward marketing and sales; to encourage University programs preparing men for careers in marketing; and to instill in members the highest professional and ethical standards.

RHO EPSILON. National Real Estate Fraternity. Includes students, alumni, faculty, and distinguished real estate executives. Active program of professional and social events.

ACCOUNTING CLUB. Brings Accounting Majors into contact with leading representatives of public accounting; through guest speakers, studies accounting functions, problems, and career opportunities of various business enterprises and governmental agencies.

PRE-LAW CLUB. Assists students planning legal careers to select most suitable law school and provides through guest speakers information on legal careers and qualifications for successful practice. Membership open to all students in University.

A.I.E.S.E.C. Initials of title used by founding French students (Association Internationale des Etudiants en Sciences Economiques et Commerciales). Arranges exchange of vacation and postgraduate short-term employment so life in other countries may be experienced through actual jobs. All interested students eligible and welcome to participate.

DELTA NU ALPHA. Chapter 193 of this national Transportation fraternity provides many professional opportunities for Transportation majors to strengthen their backgrounds and develop ties with successful practitioners.

M.B.A. ASSOCIATION. Full and parttime students working for M.B.A. degree. Professional, social, recreational activities. Works closely with M.B.A. and Dean's Offices.

DOCTORAL ASSOCIATION. Organization of persons pursuing, or who have received Ph.D. in Business Administration degree at The American University. Objectives are to: stimulate intellectual growth; provide an effective means of communication between members and faculty; recognize and reward superior achievement and outstanding contribution to doctoral education; sponsor social and educational activities for members and faculty; and promote and maintain highest standards of scholarship and intellectual excellence.

Area Professional Associations Many national professional and business associations have Washington area chapters. Students are welcome to attend their meetings and par-

ticipate in other program activities. Washington is also the scene of numerous conventions whose programs are of great educational value to business students who are regularly invited to be present.

Student Leadership Training Program The purpose of this program, offered through the Office of Student Personnel, is two-fold: one is to provide an opportunity for students to discuss the practical problems of leadership as they relate to groups in which they hold membership; the other is to develop an educational program which includes an understanding of the philosophy of leadership as well as the development of specific skills in leadership techniques.

The School hopes that each student will participate in the extra-curricular program during his college career, to the extent practical in terms of his time and ability and with his understanding that *the highest priority must always be given to his studies and to his academic objectives and responsibilities.*

Business School Club When the School of Business Administration was established in April, 1955, a group of seniors decided to form the A.U. Business School Club. They joined with graduate students and alumni of the business programs to support in every way possible the growth and advancement of the new School. Meetings were held monthly in Washington.

The Business School Club functions as both a part of and a supplement to the University Alumni Association. It builds alumni loyalty and support through recognition of the particular and specialized interests of those who have studied in Business Administration programs. Members are encouraged to participate in all alumni activities.

COURSES OF INSTRUCTION

Prerequisites Many courses call for a previous minimum background of knowledge, as indicated by courses cited in individual descriptions as *prerequisites*. Titles are those of The American University courses; equivalent courses satisfactorily completed at other accredited institutions also meet prerequisite requirements for transfer credit.

Administrative officers may sometimes waive prerequisites on the basis of experience and professional achievement. Where done, the student should secure the syllabus of the prerequisite course and complete the readings on his own. This will minimize the problem of gaps and out-of-date information.

Prerequisites mean the instructor will not use class time to go back and teach the material of the preliminary courses. Students are held responsible for entering the class already possessing the competence called for. *Thus, prerequisites warn students of the knowledge they are to bring with them in order to meet the expected standards of performance. Failure to possess this background can endanger the student's good standing and his ability to continue in the School. Therefore, students may be required to drop the course in question and register for the prerequisite course or courses instead.*

Accounting

Curriculum is registered with the State of New York.

10.306 Introductory Accounting I (3)

10.307 Introductory Accounting II (3)

Basic principles underlying concepts. Nature of assets, equities; fundamentals of business income measurement. Preparation of financial statements. Introduction to significance, uses, limitations of accounting data for management and investor decisions. Appraisal of accounting, reporting practices.

Prerequisite: 10.306 is prerequisite for 10.307.

10.314 Intermediate Accounting (3)

Review of fundamentals. Principles of asset and equity valuation; measurement of business income. Prevailing concepts and practices underlying financial statements. Financial reports and disclosure.

Prerequisite: 10.307 or permission.

10.315 Advanced Accounting (3)

Partnership accounting. Business reorganizations. Business combinations through pooling and purchase. Consolidated financial reporting. Estates, trusts, and other fiduciary accounting.

Prerequisite: 10.314 or permission.

10.400 Use of Accounting Methods (3)

Fundamentals, with concentration on uses of accounting as a tool of management. Not open to undergraduate business majors. Required of candidates for M.B.A. or Ph.D. who do not have adequate accounting background.

10.411 Cost Accounting (3)

Basic concepts and techniques. Responsibility accounting and performance measurement. Standard costs and flexible budgets as a management tool. Cost analysis for management planning and control, special decisions.

Prerequisite: 10.307 or 10.400.

10.421 Auditing (3)

Audit objectives. Framework of auditing standards. Development of basic auditing procedures, techniques. Nature and function of audit working papers. Tests and sampling in the auditing process.

Prerequisite: 10.314 or permission.

10.431 Fundamentals of Income Tax (3)

Introduction to federal taxation relating to individuals, partnerships, and corporations. Practice preparation of tax returns. Tax planning.

Prerequisite: 10.307 or permission.

10.512 Advanced Cost Accounting (3)

Special topics. Advanced work in technical problems of manufacturing costs. Current developments in cost analysis, planning, control. Cost data and statistical applications.

Prerequisite: 10.411.

10.514 Accounting: Readings and Problems (3)

Structure of accounting theory. Nature of accounting principles and postulates. Consideration of major problems of income measurement and their effect on asset and equity valuation.

Prerequisite: 10.315; 10.514 is prerequisite for 10.515.

10.532 Advanced Income Taxes (3)

Advanced aspects of particular interest to accountants, lawyers. Special problems of federal income taxes, including estates, trusts, corporate and partner-

ship liquidations, distributions, reorganizations, special transactions. Federal gift, estate taxes.

Prerequisite: 10.431 or permission.

31.008 Tax Planning in Real Estate (No Credit)

See Institutes.

10.534 Systems Design and Installation (3)

Techniques of analyzing, designing accounting systems for effective managerial control. Adapting accounting procedures to organizations of various types and sizes. Demonstration of important machine methods.

Prerequisite: 10.411.

10.539 Controllership in Business (3)

Controller's functions. Emphasis on interpretation of accounting aspects of managerial problems, reporting. Role as staff member of management team.

Prerequisites: 10.314, 10.411.

10.540 ADPS and Accounting (3)

Integration of accounting systems and modern machines. Impact of automatic data processing on functions, responsibilities of accountant. Effects on accounting operations, managerial decisions. Accounting safeguards. Field trips.

Prerequisite: 10.534.

10.565 Financial Statement Analysis (3)

See Finance.

10.711 Seminar in Accounting Theory (3)

Development of accounting theory. Analysis of current accounting problems. Review of current literature. Required of M.B.A. and Ph.D. candidates taking Accounting Comprehensive Examination.

Prerequisite: permission.

Automatic Data Processing (Computer Systems)

See "Technology of Management" which begins on page 314.

Business-Government Relations

10.500 Private Enterprise and Public Policy (formerly Business-Government Relations) (3)

How government sets framework for the economy and conduct of business. What management should know of government control, regulation, promotion of business. Areas of cooperation and conflict. Development of and trends in business-government relations.

10.501 Legal Foundations of Business-Government Relations (3)

Focuses on legal powers, procedures of selected administrative agencies and of the legislative process; legal implications for business of public policy decisions; relation of corporate legal departments to business-government relations.

Prerequisite: 10.500 or permission.

10.700 The Business Administrator and Government Policy (3)

Seminar using case problems to examine working relationships between business administrators and government (local, state, federal). Guest business, government leaders participate.

Prerequisite: 10.500 or permission.

- 10.701 Seminar in Corporate Public Affairs (3)**
 Role of corporate public affairs department in advising management of political trends and issues affecting the firm, industry, private enterprise, general political and social structure.
Prerequisite: 10.500.
- 10.703 Seminar in Business Law (3)**
 See Business Law.
- 10.705 Seminar in Business-Government Relations (3)**
 The philosophy of business-government relations with emphasis on research and in-depth analysis of issues and concepts.
Prerequisite: 10.500 or permission.
- 11.504 Government and Marketing (3)**
 See Marketing.

Business Law

- 10.201 Business Law I (3)**
 Legal concepts and functions. Federal, state court systems. Legal phraseology; elementary legal bibliography. Elements of law of contracts and agency useful to business executives.
- 10.302 Business Law II (3)**
 Functions, form, content of commercial paper. Uniform Negotiable Instruments Act. Elementary law of partnerships, corporations, trusts.
Prerequisite: 10.201.
- 10.303 Business Law III (3)**
 Principles of bailments. Law of sales, sales contracts. Elements of law of personal, real property.
Prerequisite: 10.201.
- 10.401 Legal Environment of Business (3)**
 Development of law; contracts; negotiable instruments; types of organizations; real, personal property. *Prerequisite course for graduate business administration students who did not previously study Business Law or pass waiver examinations. Not open to undergraduates.*
- 10.703 Seminar in Legal Aspects of Business Problems (3)**
 Analysis of business problems arising from recent legal developments, particularly in connection with new Uniform Commercial Code.
Prerequisite: 6 credits of Law and permission.

Business Management

- 10.456 Principles of Management (3)**
 Theories of management. Managerial functions: planning, organizing, coordinating, motivating, controlling. Budgeting. Decision-making; communication; human relations.
- 10.457 Quantitative Methods in Decision Making (3)**
 Appreciation, basic understanding of quantitative methods, tools that managers may use for improved decision-making. Range, applicability, integration within overall organizational framework.
Prerequisites: 10.456, 69.400, 10.442.
- 10.458 Business Policy (3)**
 Integration of principles and concepts previously studied in individual courses.

Analysis, definition, proposed resolution of business problems from managerial viewpoint. Case problem method, seminar approach.
Prerequisite: senior standing.

10.556 Business Budgeting and Executive Control (3)

Budgeting as a managerial tool for analysis, planning, organizing, coordinating, motivating, controlling. Development of budgeting.

Prerequisites: For graduate students, 10.400, 69.400; for undergraduates 10.307, 69.300.

10.557 Administrative Communication (3)

Fundamentals of: (1) organizational communication, including organizing of channels, systems, patterns, and (2) interpersonal communication, as developed by general semantics and the behavioral sciences.

10.558 Ethics in Management (3)

Ethical problems confronting administrators. Criteria, approaches to developing values, philosophy, ethical principles. Role of religious and spiritual factors. Applications to current organizational, administrative situations through case problems. *Open only to seniors, graduate students.*

10.656 Design of Organizations (3)

Developing structures that effectively organize all resources necessary to achieve organizational objectives. Analysis from viewpoint of authority, response, communication systems, compensation, technology, management patterns. Heavy emphasis on behavioral sciences contribution.

Prerequisite: Satisfactory completion of all M.B.A. First Year courses or equivalents.

10.657 Planning—Programming—Budgeting (3)

Conceptual foundations of management controls as expressed in quantitative terms. Establishing long, short term objectives. Planning process: formulating, controlling, evaluating, modifying. Benefit-cost analysis. Budget, other managerial tools used to evaluate performance in both dollar and non-dollar terms.
Prerequisite: Satisfactory completion of all M.B.A. First Year courses or equivalents.

10.756 Seminar in Policy Formulation and Administration I (3)

Development of executive skills through seminar approach, case problem method. Emphasis on competence in effective analysis of organizational problems, formulation of appropriate managerial policies. *Required of M.B.A. and Ph.D. Candidates.*

Prerequisites: At least "B" average in previous graduate studies, 10.456, and, for part-time M.B.A.'s, Advancement to Candidacy.

10.757 Seminar in Policy Formulation and Administration II (3)

Continuation of 10.756. Development, through seminar approach and case problem method, of executive skills. *Required of M.B.A. and Ph.D. Candidates.*

Prerequisite: 10.756 and at least "B" average in previous graduate studies.

10.758 Seminar in Human Relations I (3)

Development, through seminar approach and case problem method, of capacity to work effectively with superiors, equals, subordinates. Importance of human relations in successful business operations. *Required of M.B.A. and Ph.D. Candidates.*

Prerequisites: 10.456, 10.491 desirable background.

10.759 Seminar in Human Relations II (3)

Continuation of 10.758.

Prerequisite: 10.758.

- 10.760 Doctoral Seminar in Management Literature (3)**
Reading and analysis of major contributions to philosophy, methodology, concepts of management, human relations, other basic areas. Group analysis, seminar discussion, individual research projects. *Required of doctoral candidates; open to superior M.B.A. candidates on permission of instructor.*
- 10.761 Seminar in Philosophy of Management (3)**
Fundamental concepts of management; analysis of interrelations, relation to administrative process. Development of organizational, individual philosophy. *Required of Ph.D. Candidates.*
Prerequisites: 10.756, 10.757, 10.758.
- 10.762 Seminar in Corporate Planning (3)**
Nature, structure of planning. Development, coordination of financial, manpower, marketing, technical planning. Profitability planning. Short-term, long-term planning. Planning and forecasting.
Prerequisites: 10.656, 10.657, 10.757.

Church Management *

- 12.545 Church Program Development (3)**
Basic concepts of management and their application in designing action programs to accomplish congregational purposes, objectives, goals. Fact-finding, problem identification forecasting, policy-making, planning.
- 12.546 Church Financial Management (3)**
Systematic approaches to obtaining and using monetary resources for churches and related non-profit organizations. Stewardship applied through budgeting, fund raising, purchasing, accounting.
Prerequisite: 10.306, or permission.
- 12.547 Church Family Financial Planning (3)**
Assistance to religious leaders in planning their own family financial affairs and in helping them qualify to teach groups, counsel individuals with problems of family finance. Management of personal monetary resources in context of religious faith and family solidarity.
Prerequisite: 10.467, or permission.
- 12.548 Church Property Management (3)**
Acquiring, using, maintaining, protecting real estate and equipment for religious purposes. Legal considerations; tax responsibilities. For pastors, property managers, and others responsible for administration of physical facilities.
- 12.549 Church Office Management (3)**
Functional approach to office planning and staffing, housing and equipping, communicating and scheduling, recording and reporting. Case problems to develop, integrate administrative skills.
- 12.550 Church Personnel Relations (3)**
Responsible stewardship of human resources. Determining and describing staff positions; enlisting, assigning, and training staff personnel, both volunteers and employees; developing and maintaining staff morale.
- 12.551 Church Management: Selected Topics (2)**
Observations, field studies, conferences, shared experiences to explore significant subject areas not covered adequately in other courses. Varying

* Wesley Theological Seminary students may take church management courses for which they are qualified and which are appropriate to their degree programs, without additional cost, subject to approval of the student's faculty adviser and the Director, Center for Church Management.

themes announced each session. May be repeated if different topics are covered. Topics selected from: Accounting Methods, Estate Planning, Financial Auditing, Food Services, Group Procedures, Information Systems, Insurance Programs, Office Communication, Personnel Records, Program Budgeting, Public Relations, Systematic Purchasing.

12.552 Church Management Internship I (3)

Correlation of faculty-supervised work experience and seminar sessions, to apply previous studies, develop comprehensive philosophy. Practical research, evaluation, reports.

Prerequisite: Six credits in Church Management or permission.

12.553 Church Management Internship II (3)

Scheduled field-work assignments and seminar sessions, primarily for students preparing for religious career service as professional directors and ministers of management. An applied research project is completed and reported as if for publication.

Prerequisite: 12.552 or permission.

12.554 Church Program Promotion (3)

Management strategy that churches and related non-profit organizations may use effectively in seeking acceptance of and identification with their purposes, objectives, goals, accomplishments, potentialities, needs.

12.590 Advanced Reading Course (3)

As arranged with Program Director and supervising faculty member. Opportunity for individual student, under certain conditions and on an unscheduled basis, to pursue special interests into areas not covered in other ways. For qualified degree students who have completed six hours of approved graduate work in residence with an average grade of B or better. See current *Schedule of Classes* bulletin for detailed instructions on registration.

12.690 Graduate Research Project (3)

As arranged with Program Director and supervising faculty member. For qualified degree students who have completed 12 hours of approved graduate work in residence with an average grade of B or better. Opportunity to pursue special interests into areas not covered in other ways. Consult current *Schedule of Classes* bulletin for detailed instructions on registration.

12.746 Seminar in Church Management (3)

Advanced problems for graduate students pursuing research studies or preparing for Comprehensive Examination in this field.

Prerequisite: permission.

For those who cannot participate in the foregoing courses on a full semester basis, the Center for Church Management offers a series of non-credit Institutes the subject matter of which is substantially equivalent to that of 12.545, 12.546, 12.547, 12.548, 12.549, 12.550, and 12.554. For further details, see *Institutes*, page 303.

See also *Catalog of Wesley Theological Seminary for graduate courses related to Church Management*.

Economics

Majors in Business Administration may take the following courses in Economics where recommended:

19.100 and 101 Introduction to Economics I and II (3-3)

19.300, and 301 Intermediate Economic Analysis, Price and Income (3-3)

19.303 Landmarks of Economic Theory (3)

19.306 Money and Banking (3)

and 19.308 The Economic Development of the United States (3)
For full course descriptions and prerequisites, consult the Department of Economics in the College of Arts and Sciences in this *Catalog*.

Other courses in Economics are specifically recommended in the various Programs of the School of Business Administration.

Finance

BASIC COURSES

10.465 Business Finance I (3)

How businesses acquire and manage short-term funds. Nature, use of financial instruments. Lending institutions. Money markets. Introduction to financial management. Government assistance to small business.

Prerequisites: 10.307 or 10.400 and 19.101 or 10.442

10.466 Business Finance II (3)

Acquisition and management of long-term funds by business firms. Investment institutions as sources of funds. The capital markets. Business long-term financial problems. Government regulations.

Prerequisites: 10.307 or 10.400 and 19.101 or 10.442; 10.465 recommended.

10.467 Personal Finance (3)

Attaining personal investment goals by effective money management. Increasing value of income: budgeting, efficient saving, low cost borrowing. Providing for retirement, old age, sickness. Introduction to investments, insurance, taxes.

10.565 Financial Statement Analysis (3)

Appraisal of prevailing techniques of statement analysis. Significance of "generally accepted accounting principles". Development of meaningful analytic methods from viewpoint of financial management.

Prerequisites: 10.465, 10.466.

COMMERCIAL BANKING *

10.571 Commercial Banking Policies (3)

Factors determining management policies, services offered of individual commercial banks. Internal: capital resources, market development, profitability of functions, relations to other banks. External: government regulation, economic conditions. For present and prospective bank officers.

Prerequisite: 19.306 or permission.

10.567 Funds Management (3)

See below.

10.771 Seminar in Commercial Bank Management (3)

Analysis of current managerial problems from viewpoint of chief executive officers. Effect on individual banks of changing economic, competitive, political, regulatory policies, proposals, actions.

Prerequisite: 10.571 or permission.

FINANCIAL MANAGEMENT

10.566 Financial Management (3)

Case problem analysis to develop skills in diagnosis and solution of wide

* Candidates for B.S. in Business Administration may receive up to 16 credits of advanced standing for studies satisfactorily completed at the American Institute of Banking. For evaluation, submit AIB transcript to Director, Finance Program.

range of financial problems and in financial decision-making. Interrelations of financial, functional, general management.

Prerequisites: 10.465 and either 10.466 or permission.

10.567 Funds Management (3)

Financial managers' use of money market for acquisition of short-term financial requirements, short-term investment of retained earnings and seasonal excess funds. Money market institutions, instruments from view-point of users.

Prerequisites: 10.465, 10.466.

10.765 Seminar in Financial Management (3)

Examination in depth of current issues, newly developed tools. Review of literature to cover total area of Business Finance. *Required of students electing Financial Management Comprehensive Examination.*

Prerequisites: 10.566, 10.567.

10.539 Controllership in Business (3)

See Accounting.

INVESTMENT ANALYSIS **

10.569 Investment Analysis (3)

Selecting securities. Timing: Dow Theory, dollar averaging, formula planning. Market fluctuations: measurement, analysis. Information sources.

Prerequisite: Basic understanding of securities from experience or from 10.466 or 10.467.

10.570 Advanced Investment Analysis (3)

Securities analysis. Investment approaches, theories. Portfolio construction, management. Current trends. Practical techniques for successful investment.

Prerequisite: 10.569.

10.769 Seminar in Investments (3)

Consideration on seminar basis of current problems and trends as indicated by developments in both academic and popular literature. Selected case problems. Required of students electing Investment Analysis Comprehensive Examination.

Prerequisite: 10.570.

Students may secure experience in portfolio management by being accepted to membership on the Investment Committee of S.A.M. The Committee administers the "Nathan A. Baily Investment Training Fund" which was contributed to S.A.M. in honor of Dean Baily and in order to provide such actual experience to supplement courses in Investments.

Industrial Relations, Personnel, and Manpower Management

10.491 Personnel and Manpower Management (3)

Manpower management in corporate enterprises. Integrating organizational goals and individual needs. Recruiting, selecting, developing, compensating people at all levels of the organization.

10.591 Manpower Appraisal and Motivation (3)

Measurement of human needs and resources. Evaluation of manpower's con-

** 10.565, 10.569, 10.570, 10.769 provide excellent background for *Chartered Financial Analyst Examination*.

tribution as a basis for non-financial and financial motivation. Determining a fair day's work and pay.

10.592 Industrial Relations (3)

Development of manpower in the union-management context. History of union organization, practices, legislation. Collective agreements as a basis for union-management cooperation and a foundation of corporate unity.

10.593 Advanced Industrial Relations (3)

Methods by which management and unions negotiate and administer collective agreements. Mock bargaining sessions. Alleviating industrial unrest and increased effectiveness in manpower utilization.

Prerequisite: 10.592 or equivalent experience.

10.594 Selection of Personnel (3)

Objectives of recruiting, selecting, appraising managers, engineers, other persons in industrial jobs. Methods of appraising suitability and potential. Use of Behavioral Science principles in making decisions about individual careers.

10.595 Training and Education in Industry (3)

Designing, administering, evaluating training and educational programs in industry. Programed instruction. Executive development programs. Cost-reimbursement plans. Evaluation of results.

57.526 Industrial Psychology (3)

Introduction to such technical problems as personnel selection, interviewing, morale, supervision, management; human relations in industry; basic human factors involved in design and operation of man-machine systems.

Prerequisite: 69.202.

10.791 Seminar in Personnel and Manpower Management (3)

Philosophy of management from standpoint of improving and utilizing to maximum human resources of a corporation. Integrating course involving student research and seminar discussion of behavioral research findings and corporate manpower development policies.

10.792 Seminar in Industrial Relations (3)

Discussion and analysis of current problems, trends in labor-management relations, new concepts in collective bargaining. Numerous student papers required. *Required of students electing Industrial Relations Comprehensive.*

Prerequisite: 10.592.

10.793 Seminar in International Manpower Management (3)

Manpower problems of developing nations, particularly as faced by multinational firms. Private and public sectors. Contributions of culture, government, education, private industry, unions.

See also courses offered by Psychology.

International Business

11.526 Fundamentals of International Business (3)

Types, patterns of operations. Foreign trade policies. American markets for foreign commodities. Foreign markets for American products. Channels of international marketing. International advertising, sales promotion.

Prerequisite: 11.300.

11.527 Export-Import Management (3)

Buying and selling in foreign trade. Export-Import shipments. Freight forwarders. International arbitration. Financing, credits, collections. Insurance. Packing. Tariff procedures and documents. Airshipments. Communications.

Prerequisite: 11.526.

- 11.528 International Marketing Operations (3)**
Business, marketing objectives of U. S. firms abroad. Techniques implementing objectives. Market analysis. Marketing intelligence and information sources. Economic cultural, organizational, government factors affecting overseas marketing operations.
Prerequisite: 11.526 or permission.
- 11.529 World Business Conditions: Problems and Opportunities In . . . (3)**
The subject matter of this course changes each session to concentrate on a different major area of the world. Opportunities for local and international firms in specific countries, grouped by language and/or geography. Analysis of purchases, employment, capital formation, cooperation with foreign businesses. Contribution of private enterprise to industrial development.
Prerequisite: 11.528 or permission.
- 11.626 The Multi-National Firm (3)**
Comparative analysis of firms with foreign subsidiaries. Organizing, controlling, managing subsidiaries; relations with governments, customers. Role in economic development, balance of payments, international relations.
Prerequisite: 11.526 or permission.
- 10.793 Seminar in International Manpower Management (3)**
See Industrial Relations, Personnel, and Manpower Management.
- 11.726 Seminar in International Business (3)**
Growth of native and international businesses throughout the world. Trends, policies, problems. Interaction with national economies, political conditions.
Prerequisite: 11.626.
- 31.025 Annual Ocean Shipping and Foreign Trade Management Institute (No Credit) See Institutes.**
See also Transportation courses on page 302; International Economics and Economic Geography courses offered by Economics; International Relations courses offered by International Service.

Managerial (Business) Economics

- 10.442 Introduction to Business Economics (3) (formerly 19.310)**
First year economics in one semester. Emphasis on areas most useful to business executives. The economy; its indicators, measures, fluctuations. The firm: economic tools for decision making. For M.B.A. and Ph.D. candidates entering without economics.
- 10.542 Foundations of Business Forecasting (3)**
Tools needed by executives to evaluate appraisals of economic outlook in decision-making. Business cycles; fluctuations of income and employment; economic and business indicators.
Prerequisite: 10.442.
- 10.642 Managerial Economics (3)**
Fundamental theoretical, analytical tools of economics applicable to decision making. Research of empirical and theoretical studies, evaluation of their application to economic analysis in management. Required of M.B.A. and Ph.D. candidates.
Prerequisites: 10.400, 69.400, 10.442, and 10.456. or equivalents.
- 10.643 Managerial Analysis (3)**
Integration of economic, organizational, motivational, legal, ethical, other managerial aspects in solving national and international business problems.

Profits; output; pricing; capital expansion; planning; control. Required of Ph.D. candidates.

Prerequisite: 10.642.

10.742 Seminar in Managerial Analysis (3)

Development of decision-making skills through analytical case studies. Oral and written reports, discussion, research. Required of Ph.D. Candidates.

Prerequisites: 10.643 and completion of Statistics tool of research or Mathematics through Calculus.

10.743 Doctoral Seminar in Managerial Analysis Literature (3)

Reading and analysis of major contributions to philosophy, methodology, concepts. Group analysis, seminar discussion, individual research projects.

Required of doctoral candidates; open to superior M.B.A. candidates on permission of instructor.

Marketing

GENERAL MARKETING

11.300 Marketing I (3)

Role of marketing in economy and in accomplishing business, social objectives. Demand and markets; marketing institutions; essential functions; government as regulator, buyer; appraisal of marketing activities, goals. Basic understanding necessary for managers, consumers.

Prerequisite: 19.100 or 10.442.

11.301 Marketing II (3)

Role of marketing management in business. Nature of decision processes; marketing research; buyer motivation, behavior; product planning; channels of distribution; pricing; promotional programs.

Prerequisite: 11.300.

11.401 Marketing Communications (3)

Problem approach to planning, writing communications essential in marketing products, services. Sales letters, manuals, brochures, bulletins, reports, articles for trade publications.

11.402 Salesmanship (3)

Art of salesmanship; creation of consumer desires, aiding customers in buying. Buying motives; selling techniques; characteristics of efficient salesmen. Selling in a dynamic economy.

11.411 Principles of Advertising (3)

Advertising approach to marketing problems. Advantages, limitations of advertising. Elements of advertising campaigns; budget, product, consumer studies, media selection, copy, layout, production, scheduling, testing.

Prerequisite: 11.300 or advertising experience.

11.436 Retailing Management (3)

Basic principles, techniques of merchandising, store operation. Planning, organizing, controlling operations. Buying, pricing, promoting. Accounting procedures, expense management. Managerial approach through cases.

Prerequisite: 11.301 or permission.

11.501 Consumer Markets (3)

Consumer income, expenditure, savings. How consumers exercise economic sovereignty. Competition by industries, retailers for consumer dollar. *Recommended for marketing, retailing, real estate, economics, sociology students.*

Prerequisites: 19.101 or 10.442, 69.202 or 69.400, 11.301 or 11.300 and graduate standing.

- 11.502 Marketing Research (3)**
Information collection, interpretation, presentation for shaping marketing objectives, policies, planning. Methodology; analytic techniques; sources of data.
Prerequisites: 69.202 or 69.400.
- 11.583 Real Estate Market Analysis (3)**
See Real Estate.
- 11.504 Government and Marketing (3)**
Influence of federal government on marketing decision-making. Effects of government purchases on private activity. Marketing information, services of government. Regulation. Impact on private enterprise.
Prerequisite: 11.300 or permission.
- 12.565 Physical Distribution Management (3)**
See Transportation.
- 11.601 Marketing Management (3)**
Factors affecting marketing management decisions. Demand analysis, buyer behavior, forecasting; competitive analysis; distribution structure, locational patterns; cost analysis; optimizing. Planning Marketing Programs. Determining product, channel, price, promotion policies.
Prerequisite: permission.
- 11.701 Seminar in Marketing (3)**
Advanced case problems; critical review of marketing thought, literature; analysis of current trends, problems; individual research and a report of results. Required of students electing the Marketing Comprehensive Examination.
Prerequisite: minimum of 6 graduate credits in Marketing.

ADVERTISING

- 11.511 Sales Promotion (3)**
Methods, devices to increase demand created by merchandising, mass advertising, personal selling. Emphasis on techniques aiding development of individual selling abilities.
Prerequisite: 11.411.
- 11.512 Advertising Copy (3)**
How to write advertisements which increase sales. Distinctive problems of various types of copy analyzed, methods of copy testing evaluated.
Prerequisite: 11.411.
- 11.513 Advertising Layout and Production (3)**
Arrangement of headlines, copy, illustrations to achieve balance, gaze motion, distinctiveness, legibility. Type, paper, production processes. Practice in visualizing, laying out, scheduling, producing.
Prerequisite: 11.512 or permission.
- 11.520 Advertising Management (3)**
Planning, implementation, evaluation of advertising programs from the managerial viewpoint. Objectives, themes, media, measurement, evaluation, budgets, advertiser-agency relations, integration into marketing plan.
Prerequisite: 11.300.

FOOD MARKETING *

- 11.546 Food Merchandising (3)**
Buying procedures; market operations; costs; profit margins. Sales planning;

* Full-time male juniors planning careers in food marketing may apply for Giant Food Store Scholarship-Internships for their senior year.

pricing; advertising; sales promotion. Relations with suppliers. Having right items at the right time.

11.548 Food Store Management (3)

Administration of food stores. Supervision, development of personnel. Expense control. Customer services. Ordering, receiving, storing, displays, marking. Housekeeping, safety. Record keeping, reports. Community relations.

INTERNATIONAL MARKETING

See International Business.

RETAILING

11.536 Store Management and Merchandising (3)

Policy making. Merchandising. General administrative course; students analyze operations of actual store from viewpoint of obtaining maximum profit.

11.537 Store Organization and Operation (3)

Problems of store management faced by operating executives: organization, location, layout, expense, personnel, receiving, packing, wrapping, delivery; customer complaints; protection, maintenance; mail, telephone orders.

11.538 Fashion Retailing (3)

Fashion in selection, promotion, selling of merchandise. Effect on consumers, manufacturers, retailers. Fashion cycles. Current fashions. Career opportunities for men, women.

11.540 Retail Buying (3)

The buyer: functions and responsibilities. Pre-buying preparation; selecting new lines; ordering. Resident buying. Buying and merchandising. Problems in buying various types of goods.

11.736 Seminar in Retailing Management (3)

Problems of retail enterprises analyzed through case studies. Students attempt to develop managerial programs or bases for managerial decisions. Oral and written reports.

SALES MANAGEMENT

11.551 Sales Management (3)

Organization of sales department. Qualifications, duties of sales manager. Recruitment, selection, training. Sales campaigns. Sales, cost control.

Prerequisite: 11.301 or permission.

11.552 Distribution Cost Analysis (3)

Marketing data as management tools to reduce distribution costs, increase selling efficiency. Analyzing distribution costs, profits by products, customers, territories.

Prerequisite: 11.502.

Production (Industrial) Management

10.481 Principles of Production (3)

Organization, operation of industrial enterprises. Economics of production. Organization, management of physical plant.

Prerequisites: 10.307 or 10.400, 19.101 or 10.442.

10.581 Work Analysis (3)

Analysis of work methods, motion economy, individual's capacity for work.

Measuring efficiency; fair day's work; job standardization, work measurement. Practical problems. Laboratory sessions.

10.582 Value Management (3)

Use of Value Engineering/Value Analysis as a management tool. Planner methodology and stimulated creativity to increase effectively profit potential by scientifically reducing costs.

10.583 Production and Material Control (3)

Objectives, application, organization of production control. Coordination with sales, manufacturing forecasts. Inventory control. Materials handling selecting equipment, cost elements, training programs.

Prerequisite: 10.481 or equivalent experience.

69.570 Quality Control (3)

See Statistics.

12.565 Physical Distribution Management (3)

See Transportation.

57.526 Industrial Psychology (3)

See Psychology.

10.781 Seminar in Production Management (3)

Case problem seminar to develop skill in understanding and ability to deal with problems involved in management of industrial enterprises. *Required of students electing Production Management Comprehensive Examination.*

Prerequisite: at least 6 graduate credits in Production Management.

PURCHASING

11.503 Purchasing Management (3)

Contribution to efficient operations. Policies, procedures, organization. Special reference to industrial goods by manufacturers, institutional purchasers. Recommended for marketing, sales management, production, general management students.

11.703 Seminar in Purchasing and Materials Management (3)

Advanced analysis of problems in purchasing, procurement, materials management. Coordination of production planning, inventory control, purchasing. Application of integrated data processing. Case discussion, supervised research,

12.565 Physical Distribution Management (3)

See Transportation.

Public Relations

The School of Business Administration offers the graduate Comprehensive Examination in *Public Relations in Business* (10.27—M.B.A., 11.44—Ph.D.) so that students wishing to study Public Relations within the framework of business administration may earn the Master of Business Administration or Ph.D. in Business Administration degree. Courses are offered by the Department of Communication which is working with the School on a closer integration of this joint offering.

Competence in business management is increasingly demanded in terms of both the administration of public relations activities and the effective practice of public relations in business. A corporate Director of Public Relations or a Public Relations consultant to business should be able to "speak the language of business and the business executive." He is expected to understand the functions, needs, and problems both of top management and of functional

executives. His business qualifications can, therefore, play an important role in his ability to develop a successful Public Relations program.

The degree in Business Administration offers the opportunity to combine both the professional specialization in Public Relations and the professional education in business administration. See the section on Journalism, Public Relations and Broadcasting for course descriptions of the following courses:

- 17.540 Principles of Public Relations (3)
- 17.541 Publicity Writing (3)
- 17.542 Promotional Campaigns (3)
- 17.543 Public Relations Overseas (3)
- 17.545 Public Relations in Business (3)
- 17.740 Seminar in Public Relations (3)
- 17.760 Seminar in Media Research (3).

Construction Management, and Insurance Real Estate, Land Planning,

(Offered with the cooperation of the Washington Board of Realtors, the Montgomery County Board, the Prince George's County Board, and the Northern Virginia Board. The latter Boards have joined the Washington Board in establishing and maintaining a Chair of Real Estate in the School.)

REAL ESTATE

- 11.476 Introduction to Real Estate Investment (3)**
Principles, strategy of real estate investment. Risk, risk analysis. Market, market analysis. City growth and structure. Location and property analysis. Mortgage markets. Foundation course, particularly valuable for those wishing background for investing in property.
- 11.576 Real Estate Transactions (3)**
(Formerly Real Estate Practice I.) Principles, practices of listing, selling, title transfer. Drawing documents. Contracts, deeds, financing, other instruments. Ownership rights, liens, taxes, assessments, other claims on real property.
- 11.577 Real Estate Administration (3)**
(Formerly Brokerage Administration.) Management of business specializing in brokerage and related areas. Planning and organizing. Specialization and departmentalization. Staffing. Sales management. Profit planning and control.
Prerequisite: 11.476 or 11.576 or 11.481 or graduate standing.
- 11.578 Real Estate Law (3)**
Legal aspects of real estate transactions for non-lawyers. Requirements in acquisition, encumbrance, transfer. Rights and obligations of parties. Survey of law, analysis of cases.
Prerequisite: 11.476 or 11.576 or 11.481 or graduate standing.
- 31.401 Institute on Property Management I (formerly 11.581) (3)**
Property management as a professional branch of real estate operations. Management of commercial, residential property. Establishing rental values, neighborhood analysis, tenant selection, leasing, tenant and owner relationships. *Final examination may be substituted for regular course examination for Course No. 1 of The Institute of Real Estate Management.*
- 31.501 Institute on Property Management II (formerly 11.582) (3)**
Advanced analysis of multi-unit apartments, office buildings, shopping centers. Legal, tax, financing aspects. Importance of regional analysis and urban redevelopment. Creative management. Internal operations. *Final examination*

may be substituted for regular course examination for Course No. 2 of The Institute of Real Estate Management.

Prerequisite: 31.401 or 11.581 or graduate standing.

11.584 Mortgage Banking (3)

Financing methods, mortgage lending. Sources of funds, mortgage and capital markets, federal agencies. Mortgage banking, direct lending. Offered with cooperation of Mortgage Bankers Association of Metropolitan Washington

Prerequisite: 11.476 or 11.576 or 11.578 or graduate standing.

31.504 Institute on Real Estate Appraisal I (3)

Official study course No. 1 of The American Institute of Real Estate Appraisers. Nature of real estate value; principles, mathematics of real estate appraising. Satisfactory grade accepted by Appraisal Institute in lieu of Required Examination No. 1.

Prerequisite: satisfactory completion of two real estate courses; or at least two years equivalent experience and permission of Program Director; or graduate standing.

31.505 Institute on Real Estate Appraisal II (3)

Case study Course II of The American Institute of Real Estate Appraisers. Urban properties; appraising procedures, capitalization techniques, case studies, problems. Credit applicable toward membership in Institute.

Prerequisite: 31.504, or passing AIREA Examination I.

11.776 Seminar in Real Estate Administration (3)

Integrating case problem seminar to provide educational background for effective administration of varied activities of real estate firms. Required of students electing Real Estate Comprehensive Examination.

11.780 Doctoral Seminar in Literature of Real Estate and Land Planning (3)

Reading and analysis of major contributions to philosophy, methodology, concepts. Group analysis, seminar discussion, individual research projects. *Required of doctoral candidates; open to superior M.B.A. candidates on permission of instructor.*

31.008 Tax Planning in Real Estate (No Credit)

See Institutes.

LAND PLANNING

11.583 Real Estate Market Analysis (3)

Analysis of real estate demand and supply in a local market. Sources of information. Population analysis, analysis of changing city and housing markets. Forecasting.

Prerequisite: 11.476 or graduate standing.

11.585 Land Planning and Use (3)

Land values and utilization. Location problems of consumers, businesses, industries, households. Changes in land use patterns produced by market forces and public policies.

Prerequisite: 11.476, or graduate standing.

11.778 Seminar in Land Planning and Use (3)

Land planning and use from interdisciplinary point of view. Roles of land economics, governmental planning, and the private sector in urban development. Urban renewal, new towns, Metropolitan problem.

Recommended background: 11.585.

12.572 Urban Transportation (3)

See Transportation.

CONSTRUCTION MANAGEMENT

11.579 Home Building (3)

Site selection, architect's responsibilities. Design, building codes, zoning. Construction materials. Landscaping. Cost, financing. Selection of builder, building contracts.

11.580 Apartment Construction (3)

Multi-family housing. Site selection, land planning, economic analysis, zoning ordinances, building codes. Design materials, construction methods, management. Relations to community growth, development. Trends, innovations.

11.779 Seminar in Construction and Housing (3)

The construction industry, with emphasis on residential construction. Changes in capital, managerial requirements; marketing policies; economic, regulatory, technological framework. Productivity, cost problems. Role in economy, issues for national policies.

INSURANCE

11.486 Fundamentals of Insurance (3)

For non-specialists in insurance. Most effective means of protecting individuals and firms against insurable risks. Kinds of risks, analysis of contracts, comparison of costs.

11.586 Life Insurance I (3)

Fundamental principles. Analysis of companies, contracts, costs to policyholders. Premium computation, valuation, apportionment of surplus. State regulations, laws, judicial decisions. *Course preparatory for Part A of the Chartered Life Underwriter's examination.*

11.587 Life Insurance II (3)

Fundamentals applied to estate planning, group insurance. Methods of computing mortality tables, premium, reserves. History of life insurance; its role in U.S. economic development. *Course preparatory for Part A of the Chartered Life Underwriter's examination.*

11.588 Property Insurance (3)

Insurance coverage of losses due to fire; the fire insurance contract; insurable interest; endorsements. Business interruption; multiple line and all risk coverage. Rates; reserves; reinsurance; loss adjustments. *Background for Chartered Property and Casualty Underwriter examination. Recognized by State of Maryland for insurance license. 11.589 and 11.591 must also be completed satisfactorily for the examination.*

11.589 Casualty Insurance (3)

Hazards underlying and protection provided by workmen's compensation, liability, automobile, aviation, accident and health, theft, boiler, machinery insurance. Rate making; regulations. Prospecting; selling. *Background for Chartered Property and Casualty Underwriter examination. Recognized by State of Maryland for license. 11.588 and 11.591 must also be completed satisfactorily for the examination.*

11.591 Automobile Insurance (3)

Nature of family auto policy; other auto policies. Financial responsibility; functions of auto insurers. *Recognized by State of Maryland for insurance license. 11.588 and 11.589 must also be completed satisfactorily for the examination.*

11.788 Seminar in Casualty and Property Insurance (3)

Integrating seminar. Emphasis on impact of underwriting changes on business operations. Research, analysis of selected topics. *Required of students electing Casualty and Property Insurance Comprehensive Examination. Prerequisites: 11.588, 11.589.*

Research and Development Management

See "Technology of Management" which begins on page 315.

Statistics

The Department of Mathematics and Statistics cooperates with the School both by offering service courses and by providing advanced courses for undergraduates pursuing the B.S. in Business Administration with a major in Statistics as well as graduate students electing Business Statistics as Comprehensive Examination field. For description, see the College of Arts and Sciences course listings.

Technology of Management

(Joint: School of Government and Public Administration and School of Business Administration)

The general designator of The Technology of Management is used to comprehend a broad spectrum of the systems characteristic of contemporary and future, information and managerial methods and institutions.

For complete description of programs and courses in Computer Systems Management Information Systems, Operations Research, Research and Development Management and Scientific and Technical Information Systems see p. 315.

Thesis and Dissertation Seminar

12.797 Master's Thesis Seminar (3)

12.799 Doctoral Dissertation Seminar (3)

Transportation, Logistics, and Traffic Management

12.462 Fundamentals of Transportation and Logistics (3)

Study of spatial relations in business; economics of transportation service and pricing; user v. carrier views; location theory and practice; geography of market structures; business logistics concept and function.

Prerequisite: 19.101 or 10.442.

12.562 Principles of Transportation (3)

Relation of transportation to economic, political, and social organization and to national development; economic theory applied to transportation; regulation and problems of national policy.

Prerequisite: 12.462 or graduate standing.

12.563 International Transportation Problems (3)

Structure, functions, operation of carriers engaged in overseas air and ocean transportation. Rates, services, regulation, governmental policies.

Prerequisite: 11.526 or 12.462 or permission of instructor.

12.565 Physical Distribution Management (3)

Physical distribution of products from assembly line to consignee; plant location theory; case studies relating to transportation, materials handling, inventory control, and warehousing in distribution systems.

Prerequisites: 12.462 or graduate standing, and 10.481 (latter may be taken concurrently).

12.566 Physical Distribution and Traffic Management (3)

Management procedures; factors determining rates; rate structures and tariffs;

classification; routing of traffic carrier's liability; claims. Case studies in distribution and traffic management.

Prerequisite: 12.565.

12.568 Interstate Commerce Law and Commission Practice (3)

Rules of procedure before regulatory bodies; rules of law; decisions of special interest in traffic administration; practitioner's code of ethics; due process; preparation of cases.

Prerequisite: 12.562 or 12.566 or traffic management experience.

12.571 Trends and Problems in Transportation (3)

Principal issues and problems facing carriers of various modes of transportation in traffic, operation, regulation.

Prerequisite: 12.462 and senior or graduate standing.

12.572 Urban Transportation (3)

Development of and problems of land use; place in metropolitan planning; adjustment to changes in population, industry, and social life; financing; local transit authorities and interstate compacts; rates and service.

Prerequisite: 12.462.

12.662 Transportation Management (3)

Representative case problems in transportation management; location of facilities; selection of equipment; market analysis; financing new equipment; scheduling and other distinctive problems; motor carriers emphasized. Required of M.B.A. candidates electing Transportation as Comprehensive Examination Field.

12.762 Seminar in Transportation (3)

Advanced analysis of problems in public regulation of all modes. Discussion and supervised research. Problems of public policy. Required of Ph.D. candidates in Business Administration and Economics electing Transportation as Comprehensive Examination Field.

12.763 Seminar in Business Logistics (3)

Theory of business logistics. Management of flow of materials from source of supply through processing to ultimate marketplace delivery. Logistics concept in planning, policy formulation and strategy of production and marketing. *Required of Ph.D. Candidates in Business Administration and Economics electing Transportation as a Comprehensive Examination field.*

31.020 Physical Distribution and Traffic Management Institute (No Credit)

See Institutes.

31.021 Air Transport Management Institute (No Credit)

See Institutes.

31.022 Railroad Management Institute (No Credit)

See Institutes.

31.023 Motor Transportation Management Institute (No Credit)

See Institutes.

31.025 Ocean Shipping and Foreign Trade Management (No Credit)

See Institutes.

31.026 Workshop Conference on Coordinated Transportation (No Credit)

See Institutes.

Institutes

The American University pioneered in developing these specially designed University-level programs for further professional growth of men and women already basically educated by experience and previous education who wish to systematize and increase their knowledge, keep current, and be better prepared for tomorrow's developments.

This "continuing education" for practitioners has attracted registrants from all parts of the U.S. and from many foreign countries. Curricula for the management development programs are generally planned with the active cooperation of the profession or industry concerned. Institutes usually provide intensive instruction in a concentrated period of time to minimize leave from regular duties.

The following Institutes have been offered recently by the School of Business Administration. For Institutes offered by the Center for Technology and Administration see p. 297. Some are offered regularly, others on irregular bases. Most have descriptive brochures. Where academic credit is available, the numbers of hours is indicated.

- 31.001 Institute on Employee Communication (No Credit)**
Theory, practice of employee-management communication. Principles, media, group relations, employees' opinion surveys. "How to do it" lectures by experts.
- 31.002 Institute on Materials Handling (No Credit)**
Materials handling and packaging; principles, fields of activity, operating problems, space utilization, determining handling costs and efficiency. Organizational aspects.
- 31.003 Institute on Business-Government Relations (No Credit)**
How laws affecting business are made; how business is represented in Washington; the political climate and the competitive system; how government is managed.
- 31.004 Energy Institute (No Credit)**
Integrated analysis for management personnel of energy industries of major common problems of production, distribution, consumption. Lectures, panel discussions, case analyses.
- 31.005 Institute on Profitable Management for Small Business (No Credit)**
Intensive management course for owners, operators, managers. Offered with cooperation of Small Business Administration.
- 31.006 Annual Tax Institute (No Credit)**
One day intensive workshop for attorneys, accountants, business executives on current tax problems, new legislation, regulations. Lectures by outstanding experts. Questions and answers.
- 31.007 Institute of Management for Appliance-TV Dealers (No Credit)**
Offered for National Appliance and Radio-TV Dealers Association. Principles of management, merchandising, budgeting, store organization and operation, advertising and promotion, etc. First Year and Advanced Programs.
- 31.008 Institute on Tax Planning in Real Estate (No Credit)**
Impact of federal income and other taxes on real estate operations, presented in simplest possible terms and directed toward needs of real estate dealers, investors, financial institutions, and government officials dealing with real estate operations.
- 31.010 Institute on Administration of Credit and Collections (No Credit)**
Managing the firm's investments in accounts receivable. Case studies dealing with policies, terms, instruments, sources, analysis of information.
- 31.011 Institute of Management for Electronics Representatives (No Credit)**
Offered for Electronics Representatives Association. Principles of management, efficient operation; marketing trends, developments.
- 31.012 Institute on Advanced Purchasing Management (No Credit)**
Professional development program for purchasing executives. Purchasing, materials management; organization, policies; legal principles, ethics; purchasing systems; records, procedures; inventory control; reports to top management.

- 31.016 Annual Value Engineering Institute (No Credit)**
Nature, functions, cost. Value Engineering as managerial adjunct in profit generation. Lectures, discussion, workshops. Offered with the cooperation of Society of American Value Engineers, Small Business Administration.
- 31.019 Institute for Program Evaluation and Review Techniques (PERT) (No Credit)**
How efficiency is gained by using Program Evaluation and Review Techniques. Accurate coordination of material, production, shipping schedules to meet important deadlines.
- 31.020 Physical Distribution and Traffic Management Institute (No Credit)**
Management development program for present and prospective traffic executives. Role of traffic management in sales, purchasing, market development. Effective organization, operation of traffic department. Developments in carrier services, facilities, rates, regulation.
- 31.021 Annual Air Transport Management Institute (No Credit)**
Intensive study of trends, problems of commercial, military air transport.
- 31.065 Institute on Church Program Development (No Credit)**
Systematic procedures for designing unified programs of action to accomplish congregational purposes, objectives, goals. Obtaining facts, identifying problems, forecasting conditions, establishing policies, determining resources, formulating plans.
- 31.066 Institute on Church Financial Management (No Credit)**
Professional guidance and practical assistance in administering church monetary resources. Budgeting, accounting, fund raising, purchasing.
- 31.067 Institute on Church Family Financial Planning (No Credit)**
Assistance to religious leaders in planning their own family financial affairs and in helping them qualify to teach groups, counsel individuals with problems of family finance. Management of personal monetary resources in context of religious faith and family solidarity. Institute of Life Insurance provides scholarships covering part cost of tuition and books.
- 31.068 Institute on Church Property Management (No Credit)**
Specific advanced education for pastors, committee members, staff personnel whose responsibilities include administering real estate for religious purposes. Acquiring, insuring, using, maintaining property.
- 31.069 Institute on Church Office Management (No Credit)**
Development of further skill in administering office functions of churches and related non-profit organizations. Planning and staffing, housing and equipping, communicating and scheduling, recording and reporting.
- 31.070 Institute on Church Personnel Relations (No Credit)**
Responsible stewardship of human resources. Determining and describing staff positions; enlisting, assigning, and training staff personnel, both volunteers and employees; developing and maintaining staff morale.
- 31.074 Institute on Church Program Promotion (No Credit)**
Basic concepts and procedures that churches and related non-profit organizations may apply effectively in seeking acceptance of and identification with their purposes, objectives, goals, accomplishments, potentialities, needs.
- 31.401 Institute on Property Management I (formerly 11.581) (3)**
Property management as a professional branch of real estate operations. Management of commercial, residential property. Establishing rental values, neighborhood analysis, tenant selection, leasing, tenant and owner relationships. *Final examination may be substituted for regular course examination for Course No. 1 of The Institute of Real Estate Management.*

- 31.501 Institute on Property Management II (formerly 11.582) (3)**
Advanced analysis of multi-unit apartments, office buildings, shopping centers. Legal, tax, financing aspects. Importance of regional analysis and urban redevelopment. Creative management. Internal operations. *Final examination may be substituted for regular course examination for Course No. 2 of The Institute of Real Estate Management.*
Prerequisite: 31.401 or 11.581 or graduate standing.
- 31.502 Institute on Business Finance for High School Teachers (3)**
Seminars, discussions, lectures, field trips, to increase understanding of how business firms and individuals save, borrow, invest funds. Fellowships covering tuition, luncheons, books provided by D. C. Savings and Loan League.
- 31.504 Institute on Real Estate Appraisal I (3)**
Official study Course I of American Institute of Real Estate Appraisers
- 31.505 Institute on Real Estate Appraisal II (3)**
Case study Course II of American Institute of Real Estate Appraisers. Urban properties: appraising procedures, capitalization techniques, case studies problems. Credit applicable towards membership in Institute.
Prerequisite: 31.504, Appraisal I of AIREA, or passing AIREA Examination I.
- 31.550 Institute on Modern Archival Administration (3)**
Lectures and discussions on all phases of archives administration including Government, Business, Church, and College/University; laboratory experience in the National Archives, the Library of Congress, and the Maryland Hall of Records.
- 31.551 Institute on Records Management (3)**
Offered in cooperation with the National Archives and Records Service. Emphasizes constructive approach aimed at effective and economical creation, maintenance, retention of records of maximum use to organization concerned.
- 31.552 Practicum in Data Processing (9)**
Six weeks intensive review of fundamentals, current state of data processing. Special attention to electronic accounting machines, computers, computer programming.

Special Management Development Programs

In addition to the above Institutes, the School offers specially designed Programs on a contractual basis with government agencies, business firms, and associations.

Many organizations use the School's extensive course offerings for "custom tailored" management development programs. Selected executives being groomed for promotion are given leave for a semester to study full-time. Metropolitan Washington firms may utilize evening and late afternoon classes and thereby not need to provide time away from the job.

10.456 Principles of Management

10.457 Business Policy

10.400 Use of Accounting Methods

10.201 Business Law I

10.491 Personnel and Manpower Management have been found particularly useful as a foundation for Supervisor and Middle Management programs.

ADMINISTRATION

Dean

NATHAN A. BAILY, PH.D.

Associate Dean, Doctoral Program

NIKOS G. PHOTIAS, PH.D., LL.D.

Assistant Dean, Under-graduate Program

HARRY J. WHEATON, M.B.A.

Assistant Dean for Administration

FREDERIC H. GLADE, JR., PH.D.

Director, M.B.A. Program

MARTIN PFAFF, PH.D.

Administrative Secretary

..... BLANCHE E. BURCH

For information, write directly to the appropriate administrative officer or Program Director of the subject-matter area.

All Admission credentials should be sent directly to Director of Admissions, The American University, Washington, D.C. 20016.

THE FACULTY

(Date in parentheses following each name is the date of first appointment to the Faculty)

Full-Time

Professors NATHAN A. BAILY (1946), B.S. in S.S., College of the City of New York; M.A., Ph.D., Columbia (Dean)

FREDERIC H. GLADE, JR. (1965), B.S., M.B.A., Ph.D., New York University (Assistant Dean, Administration)

JOSEPH E. HAMPTON* (1961), B.S., Florida; M.A., Ph.D., Ohio State; C.P.A., Florida (Director, Accounting Program)

HOWE MARTYN (1961), B.A., Toronto; M.A., Oxford (Director, International Business Program)

NIKOS G. PHOTIAS (1949), B.A., Athens University; M.B.A., Handelshochschule-Koenigsberg; M.Sc.Pol., Ph.D., Albertus University-Koenigsberg; LL.D., Friedrich Wilhelm University-Berlin (Associate Dean, Doctoral Program; Director, Managerial Economics Program)

RICHARD POWERS (1967), B.S., M.A., Ph.D., University of Virginia (Director, Center for Technology and Administration)

MYLES E. ROBINSON (1966), B.A., M.A., Ohio State; Ph.D., Northwestern (Director, Marketing, Transportation and Logistics Program)

KENN ROGERS (1968), B.A., Ph.D., London

RICHARD HENRY RUSH (1967), A.B., M.C.S., Dartmouth; M.B.A., D.C.S., Harvard (Director, Finance Program)

MAURICE SELDIN (1965), B.S., M.B.A., UCLA; D.B.A., Indiana (Director, Real Estate, Land Planning, Construction Management Program)

*On sabbatical leave, Spring 1969.

JOHN H. SMITH (1947), B.A., Iowa State Teachers College; M.B.A., Ph.D. Chicago

HAROLD F. SYLVESTER (1967), Ph.D., Johns Hopkins (Director, Manpower and Production Management Program)

Emeriti ORTON W. BOYD (1959), B.A., M.A., Ohio State; C.P.A., District of Columbia

MARVIN L. FAIR (1968), B.A., Ohio; M.A., Ph.D., Ohio State

ELCANON ISAACS (1959), A.B., LL.B., Cincinnati; S.J.D., Harvard

FRITZ KARL MANN (1936), Dr.Jur., Goettigen; Ph.D., Berlin

WALTER F. MUHLBACH (1957), Ph.B., Chicago; M.A., Ohio State

ERNST POSNER (1939), Ph.D., Berlin

HAROLD B. WESS (1953), B.S., College of the City of New York

Associate Professors KIRK L. BURNS (1968), B.S., U.S., Naval Academy; M.A., Washington, Ph.D., University of Paris

HERSCHEL CUTLER (1967), B.S., Boston; M.B.A., Pennsylvania; Ph.D., Syracuse

WILLIAM C. DULIN (1968), A.B., Western Reserve; M.B.A., Harvard; Ph.D., American (Director, Business Management Program).

HERBERT GLAZER (1968), A.B., A.M., Ph.D., Boston

MARTIN L. KING* (1960), B.S., Alabama; M.S., Washington; Ph.D., Ohio State

GANGADHAR S. KORI (1968), B.S., University of Bombay; M.S., Minnesota; Ph.D., South Dakota State

HUGH E. KRAMER (1967), Abitur (B.A.), Staedt Gymnasium; Dipl. Kfm. (M.B.A.), J. W. Goethe University-Frankfurt; Dr.rer.pol. (Ph.D.), Karl Franzens University-Graz, Austria

JAMES OWENS (1961), B.A., Loyola; M.A., University of Chicago; Ph.D., Georgetown (Director, General Business Program)

HARRY ROSENTHAL (1955), B.S. in B.A., M.B.A., American; C.P.A., District of Columbia

MICHAEL SUMICHRAST (1967), B.S., Bratislava; M.B.A., Ph.D., Ohio State

HARRY J. WHEATON (1959), B.B.A., Washington; M.B.A., American (Assistant Dean, Undergraduate Program)

Assistant Professors CHARLES I. BARTFELD (1966), M.B.A., Columbia

JAMES R. BUTTS (1964), B.S., Virginia Polytechnics; M.S., New York

REMBERT C. HOUSER (1965), B.S., Southern Louisiana; M.B.A., Alabama

ROBERT W. MILLER (1965), A.B., University of Pacific; M.B.A., Harvard (Director, Business-Government Relations and Business Law Programs)

Instructors H. JOSEPH LEVINE (1967), B.S., Lehigh; LL.B., George Washington; LL.M., Georgetown

RAYMOND LEWIS (1967), B.S., M.B.A., University of Buffalo

*On leave, 1968-69.

MARTIN PFAFF (1965), M.B.A., Ph.D., Pennsylvania (Director, M.B.A. Program)

LEROY E. PAGANO, B.G.S., M.B.A., Rollins

Director—Transportation
Institutes HERBERT O. WHITTEN (1967), A.B., Carthage; M.B.A., Harvard (Director; Transportation Institutes)

Part-Time

Note: Part-time faculty teaching in the Technology of Management Curriculum are listed under the Center for Technology & Administration.

Adjunct Professors C. CANBY BALDERSTON, B.S., M.A., Ph.D., Pennsylvania

CHARLES W. FOTIS (1961), A.B. Ed.M., Tufts; Ph.D., American. *Director, Civilian Training and Career Development.*

PAUL W. HOWERTON (1964), Ph.B., Northwestern

CLYDE W. HUMPHREY (1961) B.S., Eastern Kentucky State; M.A., George Peabody; M.R.E., Wesley Theological Seminary (*Director, Center for Church Management*)

HARRY W. KETCHUM (1939), B.A., Denver; M.B.A., Harvard. *Economist, Food Irradiation Unit, Office of Chemicals & Consumer Products, U.S. Department of Commerce.*

ELMER C. KOCII (1940), B.S., M.S., Illinois; LL.B., Wisconsin. *Research Accountant, Securities and Exchange Commission.*

MARTIN KRIESBERG (1951), B.S.C., Northwestern; Ph.D., Harvard. *International Agricultural Development Service, U.S. Department of Agriculture.*

MELVIN E. LEWIS (1949), B.A., George Washington; M.A., American; C.P.A., Virginia, *Chief Accountant, Washington Metropolitan Area Transit Commission.*

VERGIL REED (1965), B.S., Indiana; M.B.A., Ph.D., Columbia

RALPH ROBEY (1963), A.B., Indiana; A.M., Ph.D., Columbia. *Economic Consultant and Lecturer.*

Professorial Lecturers MARTIN ATLAS, A.B., New York; A.M., Columbia; LL.B., George Washington. *Executive Vice-President, Cafritz Co., Realtor and Builder.*

OSCAR BESSIO, B.S. in M.E., Cooper Union; M.S. in M.E., Columbia; M.B.A., American. *Deputy Chief of Staff for Logistics, Industrial Engineering Branch First Army HQ, Fort Meade.*

HARRY A. BOSWELL, JR., B.S., Maryland; LL.B., Georgetown. *Realtor; City Planner; States Regional Representative to Appalachia Regional Commission*

DONALD R. BRENNER, B.Sc., LL.B., Ohio State. *Attorney*

HERBERT R. BROWN, B.S., M.A., New York; Ed.D., American. *Director of Personnel, National Education Association*

BENJAMIN BURDETSKY, B.S., M.S., Temple; Ph.D., American. *Deputy Commissioner of the Bureau of Statistics, Department of Labor*

WILLIAM J. BURNS, B.S., Maryland; M.B.A., American. *Vice-President, Tri-State Motor Transit Co.*

W. DONALD CALOMIRIS, A.B.A., American; C.P.M., *Treasurer and Property Manager, William Calomiris Investment Corp.; President, Washington Chapter IREM*

JAMES W. CULLITON, A.B., Canisius; M.B.A., D.C.S., Harvard. *Commissioner, U.S. Tariff Commission.*

LEO DAVID, B.A., George Washington; M.B.A., Harvard; C.P.M. *Vice-President and General Manager, Greenhoot, Inc., Realtor*

LAWRENCE DOBROW, B.A., New York. *Chairman of the Board and Creative Director, Lewis, Dobrow & Lamb, Inc., Advertising Agency*

BERNARD T. DODDER, B.S., Oklahoma A & M; M.S., Iowa State; C.P.A., State of Maryland. *President, Dodder Mutual Insurance Agency (ret.); Insurance Consultant*

FREDERICK C. DYER, A.B., Holy Cross; M.B.A., Amos Tuck. *Special Assistant, Civilian Manpower Management, Navy Department*

JULIAN FELDMAN, B.A., Queens; M.S., Ohio State. *Executive Director, Washington Hebrew Congregation*

DAN H. FENN, JR., A.B., Harvard. *President, Center for Business Govt Relations.*

CARROLL B. FITCH, A.B., Michigan; M.A., New York University. *Administrative Officer, The Riverside Church in the City of New York*

NELSON P. GRELLER, B.S. in C.E., New York; P.E., District of Columbia. *President, Nelson P. Greller & Associates, Management Consultants*

PROSPER N. HILL, B.A., Washington; M.B.A., Penn State; C.L.U. *President, Marsh Investment Co., Inc.*

RAYMOND W. HOECKER, B.S., Iowa State; M.S., Ph.D., Cornell. *Chief, Wholesaling & Retailing Branch, Agricultural Marketing Service, U.S. Department of Agriculture; Past President, D. C. Chapter, American Marketing Association*

JACOB N. JOHNSON, B.S. in E.E., So. Dakota State; M.B.A., Ph.D., American. *Director, Management & Power Systems, CEIR, Inc.*

OLIVER H. JONES, B.A., St. Francis; M.A., Connecticut; Ph.D., Penn State. *Director of Research, Mortgage Bankers of America*

ARNOLD M. KRONSTADT, B.M.E., George Washington; P.E., State of Maryland and D. C. *Partner, Collins & Kronstadt-Leahy, Hogan, Collins, Architects, Planners and Engineers*

EDWARD R. LEHMAN, B.S., State University of New York; M.B.A., Ph.D., New York. *Economist, U.S. Treasury Department*

JAC LEHRMAN, *Executive Vice-President, Giant Food, Inc.*

CARL H. MADDEN, B.A., M.A., Ph.D., University of Virginia. *U.S. Chamber of Commerce*

FREDERICK A. MARSTELLER, B.A., Washington & Lee. *Marsteller, McCabe & Co., Inc., Realtors*

HARLAN B. MILLER, B.S., Kansas State Teachers College; M.S., University of Denver; Ph.D., Colorado. *Director of Education, Institute of Life Insurance, New York, N.Y.*

WALTER R. MILLIKEN, B.S., U.S. Military Academy; M.S., Colorado. *LMI*

FERD NAUHEIM, *Partner, Kalb Voorhis and Company; Direct Mail, Sales, and Sales Training Consultant; Past-President, Washington Sales Executives Club*

STANLEY NEHMER, B.S.S., College of City of New York; M.A., Columbia. *Deputy Assistant Secretary of Commerce for Resources*

JEROME P. PICKARD, A.B., M.S., Wisconsin; Ph.D., Syracuse. *Research Director, Urban Land Institute*

ROBERT F. POWELL, B.S., Yale; M.S., Cornell. *Naval Academy*

ALBERT M. PROSTERMAN, A.B., Illinois. *President, A. M. Prosterman & Associates, Marketing Consultants*

A. M. PROTHRO, B.A., Baylor; LL.B., George Washington. *General Counsel, Legal Division, Federal Housing Administration*

TED RABUN, B.S., Florida; M.S., Illinois; C.P.A. U.S. *General Accounting Office*

WILLIAM J. RECKMEYER, B.S., U.S. Military Academy; Ph.D., Ohio State, *Consultant*

WILLIAM F. ROGERS, A.B., Arkansas. *Director of Industrial Relations, Giant Food, Inc.*

NATHANIEL H. ROGG, B.A., M.A., New York; J.D., George Washington. *Executive Vice President, National Association of Home Builders*

IRVING G. RUDD, B.S., Harvard; M.A., Columbia. *Executive Vice President, D. C. National Bank*

DAVID SACHS, B.A., Michigan; M.B.A., Harvard; M.A.I. *Partner, George S. King Co., Realtors*

WILSON L. SCOTT, B.A., Yale; M.A., Ph.D., Johns Hopkins. *Director, Data Unlimited*

JACOB SEIDENBERG, B.S., Temple; LL.B., Pennsylvania; Ph.D., Cornell. *Industrial Relations Consultant*

GORDON THOMAS SHAHIN, B.S., M.B.A., Buffalo; M.S., Syracuse; Ph.D., Ohio State. *Analyst, C.I.A.*

JOHN SPERRY, B.S., New York; M.B.A., Pennsylvania; Ph.D., American

LAURENCE I. WOOD, B.A., DePauw; J.D., Northwestern. *Vice-President, Washington Corporate Government Affairs, General Electric*

Lecturers DALE L. ANDERSON, B.S., Oregon State; M.S., Purdue. *Agricultural Administrator, U.S. Department of Agriculture*

JAY LOUIS BINDER, B.S., M.B.A., American.

WESLEY BISHOP, B.S., M.A., Murray State. *Employee Development, U.S. Secret Service*

WILLIAM K. BISHOP, A.B., Bucknell; M.L., Pittsburgh. *Store Manager, Woodward & Lothrop*

BERNARD BLANKENHEIMER, B.A. Brooklyn College; M.A., George Washington. *Director, Africa Division, Bureau, International Commerce*

MORRIS R. BOSIN, B.S., in B.A., M.B.A., American

LEONARD L. BRANNAN, M.B.A., Harvard. *Director, Management Development, No. Virginia Community College*

JOSEPH P. BRENNAN, A.B., Notre Dame; M.B.A., American. *Marketing and Economic Analysis, United Mine Workers of America*

B. BROOKE BRIGHT, A.B., American. *Senior Consultant, Harvey A. Poenack & Associates*

GEORGE BRITE, B.S., Maryland; M.B.A., American. *Analyst in Industrial Organizations & Corporation Finance, Library of Congress*

HAROLD A. BURCH, B.S., Pennsylvania; M.B.A., American. *Consultant, Naval Reserve Association*

M. MICHAEL CRAMER, B.A., Penn State; LL.B., George Washington. *Partner, Sisk & Cramer*

JOHN A. DEAN, B.S. in B.A., Youngstown; M.B.A., American. *Director, Distribution Services, Hot Shoppes*

LOWELL R. DITZEN, B.A., William Jewell; B.D., McCormick Theological Seminary; D.D., Park; LL.D., Central. *Director, National Presbyterian Center*

SALVATORE F. DI VITA, B.S./I.E., New York University; M.B.A., Ohio State; D.B.A., Harvard. *Program Administrator, Data Processing Division, GEM, IBM*

GUY DOUYON, Licence en Droit, Haiti; M.B.A., American. *International Economist, Inter-American Development Bank*

GEORGE M. FERRIS, JR., B.S., Princeton; M.B.A., Harvard. *Managing Partner, Ferris and Company, Investment Bankers*

ROBERT M. FISHER, A.B., Michigan; M.B.A., Ph.D., Columbia. *Senior Economist, Federal Reserve Board*

CHARLES A. FRANCIK, B.S., J.D., Indiana. *Director of Government Affairs, Corning Glass Works*

ROBERT P. GATEWOOD, B.S., U.S. Naval Academy; C.L.U. *Robert P. Gatewood and Company, Financial Advisors; Past-President, D. C. Chapter, American College of Life Underwriters*

ROBERT M. GLADSTONE, B.S., Massachusetts Institute of Technology; M.S., North Carolina. *Robert Gladstone & Associates*

SIDNEY GLASSMAN, B.S., City College of New York; M.A., Columbia. *Vice-President, Residential Management, Charles E. Smith Management Corporation*

JOHN E. GOGARTY, B.S., Maryland; M.A.I., *Real Estate Appraiser; Secretary, D. C. Chapter, AIREA*

JOHN GUANDOLO, A.B., Illinois; LL.B., Maryland. *Lawyer*

PETER PAUL HANAGAN, B.S., Georgetown; LL.B., George Washington

ALDEN W. HOAGE, A.B., Maryland; LL.B., LL.M., George Washington, *Attorney*

HARRISON N. HOPPE, B.S., Penn State; M.S., M.I.T. *Operations Analyst, Research Analysis Corporation.*

ROBERT J. HUGLI, B.S., M.B.A., American. *Audit and Tax Staff, Lybrand, Ross Bros. & Montgomery*

EARL V. JOHNSON, A.B., Brown; M.A.I., S.R.A., *Director, Appraisal Staff, UDS, General Services Administration*

MARTIN L. KAMEROW, B.C.S., M.C.S., Ben Franklin; C.P.A., Maryland, Virginia, and D.C. *Partner, Kamerow & Serber*

ROBERT N. KATZ, A.B., LL.B., Texas, M.B.A., Harvard. *Solicitor, Federal Maritime Commission*

WILLIAM L. KENDIG, B.S., Elizabethtown; M.B.A., American

HUGO K. KOCH, B.A., Washington; M.H.A., Baylor

BERNARD M. LEVY, B.S., M.B.A., Pennsylvania. *Vice-President, Cafritz Company*

ROBERT A. LEVY, B.S. in B.A., M.B.A., Ph.D., American. *President, Computer Directions Advisors, Inc.*

RICHARD LUNDQUIST, B.S., Wharton; M.S., Columbia. *Equitable Life Insurance*

ROBERT J. MCKINSEY, B.A., J.D., University of Chicago. *Executive Vice-President, Universal Building Products Corporation*

RICHARD F. MCMAHON, A.B., M.A., Ph.D., Catholic. *Associate Director Education Programs Division, Office of State and Community Relations, EEOC*

MARTIN MALTENFORT, B.A., M.A., Montclair Teachers College; M.B.A., American. *Division Chief, Naval Communications Center, Department of Defense*

WILLIAM A. MANN, B.A., Texas; M.B.A., Kansas; LL.B., George Washington. *Lawyer, Bernstein, Kleinfeld & Alper*

JOSEPH MENSH, LL.B., LL.M., National. *Vice-President, Sidney Z. Mensch & Company, Realtors*

RENE MITTELBRONN, B.A., LL.B., Loyola University of the South. *Hearing Examiner, Bureau of Rates & Practices, Interstate Commerce Commission*

CHARLES T. MUNTAIN, A.A., B.S., LL.B., Baltimore. *Labor Liaison Officer, Equal Employment Opportunity Commission*

JAMES L. MYRAH, B.S. in B.A., Roosevelt; M.S., Naval Post-graduate School. *Assistant Head, Bureau of Medicine & Surgery, U.S. Navy*

PETER O'REILLY, A.B., Fordham. *General Sales Manager, WTOP Radio*

BART PAFF, B.A., University of Idaho; M.A., American.

EDWARD D. PERKINS, B.A., Michigan; M.B.A., American. *Special Representative, Pan-American World Airways*

LEE PERRI, Advertising Certificate, Diploma in Design, Philadelphia Museum of Art. *Lee Perri Associates*

JOSEPH R. POTTER, B.S., Maryland; M.B.A., Western Reserve. *ICC*

WALTER M. PRICHARD, B.S., Maryland; M.B.A., American. *Materials Manager, Atlantic Research Corporation; Past-President Washington Purchasing Agents Association*

SHIRLEY REFF, B.S., M.B.A., American. *National Institute of Health*

ANTHONY E. REYNOLDS, B.S., Maryland; M.B.A., American; M.A.I. *American Real Estate Appraisal Corporation*

MORGAN RODERICK, B.S., M.E., Columbia. *Head Value Engineer, Bureau of Ships*

HOWARD C. ROHER, B.S. in B.A., New York University. *Church Management Consultant*

JOSEPH P. ROMEO, B.A., M.B.A., George Washington. *Branch Chief, Division of Corporation Finance, Securities & Exchange Commission*

DAVID G. ROSS, B.S., LL.B., American. *Assistant Corporation Counsel, D.C.*

JAMES S. SAGNER, B.S., Washington & Lee; M.B.A., Pennsylvania; *Vice-President, General Administration, Sagner, Inc.*

EDWARD SANDS, B.B.A., City College of N.Y.; M.S., Illinois. *Financial Analyst, Securities & Exchange Commission.*

WILLIAM B. SAUNDERS, B.A., Harvard; M.A., American. *EBS Management Consultants Inc.*

RICHARD SELLMAN, B.B.A., City College of N. Y.; M.B.A., Columbia; M.B.A. Boston

ROYAL SHIPP, B.S., Utah; M.B.A., Indiana. *Economist, Division of Statistics and Research, Federal Reserve System*

CARL SKONBERG, Ph.B., M.B.A., Chicago. *Economist, Bureau of Economic Federal Trade Commission*

ALBERT H. SMALL, A.B., Brooklyn College; M.A., American. *International Economist, U.S. Tariff Commission*

ANTHONY SONNINO, R.A.G., Royal Technical Institute, Rome; C.Sc.D., University of Rome; M.A., Ph.D., American. *Chief, Commercial Rates Section Civil Aeronautics Board*

JACK SPIVACK, B.S., Long Island. *Purchasing Analyst, Melpar, Inc.*

STANLEY R. STEIN, B.S., Wharton. *U.S. Land Company*

HERBERT P. STUTTS, B.S., M.S., Maryland. *Dean, Summer Session, American*

ARTHUR L. WALKER, B.S., North Texas State; M.A., Colorado State. *State Supervisor, Business Education, State Department of Education of Virginia*

GEORGE C. WEBSTER, B.S., Maryland; M.B.A., Harvard; LL.B., LL.M., Georgetown. *President, George C. Webster & Associates, Management Consultants*

THE CENTER FOR TECHNOLOGY AND ADMINISTRATION

History The Center for Technology and Administration was organized in 1958 by the School of Government and Public Administration to provide a vehicle for the study of the effect of the emerging technological revolution on the administrative process. In 1964, the School of Government and Public Administration, with the cooperation of the Department of Mathematics and Statistics of the College of Arts and Sciences, and the School of Business Administration, developed the curricular area known as TECHNOLOGY OF MANAGEMENT and assigned the instructional function to the Center for implementation. The establishment of a Graduate Certificate Program in Technology of Management in 1967, administered by the College of Continuing Education, combines with the previous development mentioned above to make the Center for Technology and Administration a University-wide institution governed by the Policy Board named above. The TECHNOLOGY OF MANAGEMENT curriculum embraces seven Comprehensive Fields which are described on the next page.

CURRICULUM COORDINATION

In the University course numbering system, this curriculum is in the 55.000 series and is *not* a part of any other School. The relationship of this curriculum to the separate schools is defined by the schools themselves and currently appears as follows:

FOR THE SCHOOL OF BUSINESS ADMINISTRATION—

Required at the MBA level—one Comprehensive Field

Required at the PhD level—

- (a) one Comprehensive Field for PhD in Business Administration,
- (b) two Comprehensive Fields for PhD in Business Administration:
Technology of Management.

FOR THE SCHOOL OF GOVERNMENT AND PUBLIC ADMINISTRATION—

Required at the MA level—one Comprehensive Field

Required at the MPA level—two Comprehensive Fields

Required at the PhD level—two Comprehensive Fields

FOR THE COLLEGE OF ARTS AND SCIENCES—

In the Department of Economics

Required at the PhD level—one Comprehensive Field

Comprehensive Fields Comprehensive Fields offered by the Center for application in other schools and departments graduate degree programs are:

55.062 Data Processing for Teachers—Masters

55.063 Computer Systems

55.064 Operations Research

55.065 Scientific and Technical Information

55.066 Management Information Systems

55.067 Research and Development Management

55.068 Sources of Scientific Information: One Science—Doctoral

The educational aim of the instructional program offered in each of these comprehensive fields, excepting 55.062 Data Processing for Teachers, is the preparation of *technical management personnel*. In the pursuit of this aim, students will be expected to achieve a reasonable competence in the use of quantitative tools of analysis, and be able to apply and understand these tools in the discharge of the managerial function.

The aim of Comprehensive Field 55.062 Data Processing for Teachers is the development of a competence which will permit students, upon graduation, to teach data processing at the high school or community college level.

Students who plan to pursue the Technology of Management curriculum are urged to maintain close liaison with the school or college in which their degree will be awarded to insure that all requirements, other than those in Technology of Management, are met.

The Center counseling staff will undertake to advise all students on programs they select in the Technology of Management curriculum. However, on questions relating to admission, the acceptance of undergraduate credits, and other matter pertaining to overall degree program planning, students should see the particular counselor within the school or college in which they are pursuing their degree. For the 1968-69 academic year, these counselors are:

FOR THE SCHOOL OF BUSINESS ADMINISTRATION

at the M.B.A. level, Dr. Frederick M. Glade, Jr.

at the Ph.D. level, Dr. Edwin G. Caudill

FOR THE SCHOOL OF GOVERNMENT AND PUBLIC ADMINISTRATION

at the M.A. and M.P.A. level, Dr. Robert Cleary

at the Ph.D. level, Dean Earl DeLong

FOR THE COLLEGE OF ARTS AND SCIENCES

in the Department of Economics, Dr. Nancy Barrett;

in the Department of Mathematics and Statistics, Dr. John Smith

FOR THE COLLEGE OF CONTINUING EDUCATION

at the M.S. in Teaching level, Dean William Lanier

On matters relating to the particular comprehensive field of interest, the point of contact is the program director concerned. When no program director is named, students should contact the Assistant to the

Director, who supervises the Center's overall counseling program.

Outlined below are suggested course sequences, flexible enough to meet the needs of each the cooperating Schools and Colleges, yet sufficient in breadth and depth of subject matter to meet the competences required at the *masters level*. For the *doctoral level*, programs are planned and tailored individually to match the background educational experiences of the student, and to assist him in the pursuit of his individual educational objectives. Courses outside the Center's educational program may be included in arranging a program at the doctoral level. Students pursuing the Ph.D degree should consult the individual schools for a program designed to meet their needs. In those cases where the student is directed to contact the Center by the school, the Center's Director will arrange a suitable program of study and research.

SUGGESTED PROGRAMS OF STUDIES

Where "Field Requirements" are shown, nine semester hours of course work are required for the masters degree and twelve for the Ph.D., plus seminars if required.

55.062 DATA PROCESSING FOR TEACHERS

FOUNDATION REQUIREMENTS:

- 55.310 Introduction to Data Processing
- 55.533 Computer Programming I
- 55.534 Computer Programming II
- or
- 55.412 Computer Programming III, which will substitute for both 55.333 and 55.334
- 69.202 Basic Statistics
- 41.101 Survey of Mathematics II

FIELD REQUIREMENTS:

- 55.530 Automatic Data Processing Systems
- 55.561 Management of ADPS
- 55.560 Systems Design for Business Operations
- 55.633 Evaluation of Software

55.063 COMPUTER SYSTEMS

FOUNDATION REQUIREMENTS:

- 55.310 Introduction to Data Processing
- 55.333 Computer Programming I
- 55.334 Computer Programming II
- or
- 55.412 Computer Programming III, which will substitute for both 55.333 and 55.334
- 55.411 Introduction to Management Mathematics

GENERAL REQUIREMENTS: 3-6 hours

- 55.530 Automatic Data Processing Systems
- 55.511 The Systems Approach

FIELD REQUIREMENTS:

- 55.561 Management of ADPS
- 55.632 Advanced Computer Applications

- 55.633 Evaluation of Software
- 55.531 Computer Design
- 55.730 or 55.735 Seminars in Computer Systems
(depending upon thesis option)

55.064 OPERATIONS RESEARCH

FOUNDATION REQUIREMENTS:

- 69.300 Business Statistics, or
- 69.400 Managerial Statistics
- 41.111 Fundamentals of Mathematics II, or
- 55.411 Introduction to Management Mathematics

GENERAL REQUIREMENTS:

- 55.540 Operations Research in Management

FIELD REQUIREMENTS:

- 55.542 Probability & Statistics for Management Decisions
- 55.641 Methods of Operations Research I
- 55.642 Methods of Operations Research II
- 55.740 or 55.745 Seminar in Operations Research
(depending upon thesis option)
- 41.576 Mathematical Methods of Operations Research

Students whose backgrounds are appropriate may, with approval, take courses in Statistics, Mathematics and Economics as substitutes.

55.065 SCIENTIFIC AND TECHNICAL INFORMATION SYSTEMS

FOUNDATION REQUIREMENTS:

- 55.310 Introduction to Data Processing
- 55.411 Introduction to Management Mathematics
- 69.400 Managerial Statistics

GENERAL REQUIREMENTS:

- 55.530 Automatic Data Processing Systems
- 55.511 The Systems Approach

FIELD REQUIREMENTS:

- 55.550 Survey of Information Science & Technology
(Formerly Types and Uses of Scientific & Technical Information)
- 55.653 Concepts of Indexing and Abstracting
- 55.656 Publication Techniques
- 55.651 Technical Machine Systems
- 55.655 Automated Library Systems
- 55.750 or 55.755 Seminar in Scientific & Technical Information Systems
(depending upon thesis option)

55.066 MANAGEMENT INFORMATION SYSTEMS

FOUNDATION REQUIREMENTS:

- 55.310 Introduction to Data Processing
- 55.411 Introduction to Management Mathematics
- 69.400 Managerial Statistics

GENERAL REQUIREMENTS:

- 55.530 Automatic Data Processing Systems
- 55.511 The Systems Approach

FIELD REQUIREMENTS:

- 55.560 Systems Design for Business Operations
- 55.561 Management of ADPS
- 55.660 Management Information & Reporting Systems
- 55.760 or 55.765 Seminar in Management Information Systems
(depending upon Thesis Option)

55.067 RESEARCH & DEVELOPMENT MANAGEMENT

FOUNDATION REQUIREMENTS:

- 69.400 Managerial Statistics
- 54.310 Public Administration or
- 10.481 Principles of Production

GENERAL REQUIREMENTS:

- 55.511 The Systems Approach
- 55.570 The Management of Research & Engineering Organizations
and Laboratories

FIELD REQUIREMENTS:

- 55.670 The Politics and Economics of Research & Development
- 55.671 R&D in the Total Organization
- 55.672 Scientific & Engineering Manpower
- 55.673 Planning & Control of Research & Development Operations
- 55.770 or 55.775 Seminar in Research & Development Management
(depending upon Thesis option)

55.068 SOURCES OF SCIENTIFIC INFORMATION: ONE SCIENCE

This field is available only to Ph.D. students who also elect 55.65 *Scientific and Technical Information Systems*. The related course work or independent study or research will depend on the particular scientific field involved, and will be individually planned for the student on the basis of what is available from cooperating science departments in the College of Arts and Sciences, or from other Universities within the Washington area who are members of the Consortium of Universities.

UNDERGRADUATE PREPARATORY COURSES

55.310 Introduction to Data Processing (3)

An introduction to the problems, principles, and methods of Data processing.

Prerequisites: 69.200 and 41.101 or 41.110, or equivalent, or permission.

55.333 Computer Programming I (3)

System 360 assembly language and beginning FORTRAN

Prerequisite: 55.310 or equivalent.

55.334 Computer Programming II (3)

Full FORTRAN IV, and COBOL.

Prerequisite: 55.333 or equivalent.

55.411 Introduction to Management Mathematics (3)

Mathematical logic, elementary point set theory, finite probability, Markov chains, difference equations, vectors and matrices and matrix games.

Prerequisite: 41.101. Not required where 41.110 and 41.111 (or equivalents) have been completed satisfactorily.

55.412 Computer Programming III (3)

FORTRAN IV and COBOL. Open only to graduate students who have

not had 55.333 and 55.334. Credit not allowed if either 55.333 or 55.334 taken.

Prerequisite: 55.310 or equivalent, or permission.

ADVANCED COURSES

55.511 The Systems Approach (3)

An introduction to the systems analysis approach to the study and design of managerial and operational organization and process. This course is fundamental to all other courses in this general sequence, or for anyone who expects to be responsibly concerned with the managerial, operational or control organizations and processes of business or government. This course will include problem exercises to illustrate the rigor of the discipline and the nature and scope of its applications.

55.512 Introduction to Cybernetics (3)

This course is an introduction to the abstractions of Cybernetics. The operational aspects of human intellect are translated into machine simulation and examined for validity of communication and control. The man-machine symbiosis is studied as a means to augment man's capability to solve complex problems. The stability of large and small systems through homeostatic control is another part of the course. Mathematical explanations are kept at a minimum.

55.513 Technology and Administration (3)

The effects of technological and scientific development on the organizational operations, and staff functions of the public or private administrative establishment. The implications for the manager and the managerial unit of the information and cybernetic revolutions, and of modern technological instruments and methods for the performance of societal and administrative functions. The reciprocal effects of managerial requirements on technological development. Includes a general appreciation but not an intensive development of the significance of research and development for the general manager or administrator.

Courses Related to the Comprehensive Examination Fields

55.063 COMPUTER SYSTEMS

55.530 Automatic Data Processing Systems (3)

A survey of the systems aspect of ADP. Emphasis is placed on the computer organization and equipment operation, the concept of programming, data processing equipment, information and data systems, systems analysis, equipment acquisition and utilization, and data communication systems.

Prerequisite: 55.410 or equivalent experience.

55.531 Computer Design (3)

Boolean algebra, application of Boolean algebra to switching elements, control, arithmetic units and converters, error detection and correction, logic storage elements and sequential circuits, finite automata, Turing machine

Prerequisites: 55.530 and 55.411 or 41.111.

55.561 Management of Automatic Data Processing Systems (3)

See Field 55.66 for course description.

Prerequisites: 55.530; and 10.456 or 53.353 or equivalent experience.

55.632 Advanced Computer Applications (3)

Applications to behavioral and management sciences, artificial intelligence and simulation of cognitive processes.

Prerequisites: 55.334 and 55.330, or equivalents.

55.633 Evaluation of Software (3)

Criteria used to evaluate the many facets of software are examined. Based on restrictions of hardware selection, the nature of the data processing problem and system specifications, a variety of software packages are examined.

Prerequisites: 55.334 or equivalent

55.635 Workshops in Computer Systems (3)

These workshops will deal with one or more of the following topics as needed: Higher level and procedure-oriented languages, multi-processing, multi-programming; simulation languages, and data transfer systems. File structures are also examined.

Prerequisites: 55.334 and 55.330 (Additional mathematical requirements may be necessary in specific subject coverages. See current session Schedule of Classes.)

SEMINARS

Prerequisite: Permission.

55.730 (or 55.735) Seminars in Computer Systems (3)

Offered with varying sub-subjects.

55.799 Doctoral Dissertation Seminar: Technology of Management (3-12)

55.064 OPERATIONS RESEARCH

55.540 Operations Research in Management (3)

How operations research supports management; decision theory approach; applied decision theory; introduction to basic operations research models and problems; implementation of operations research solutions.

Prerequisites: 69.300 or 69.400; 41.111 or 55.411.

55.542 Probability and Statistics for Management Decisions (3)

Decision under uncertainty; cost of uncertainty; probability distributions; conditional models; Bayesian approach; sequential decision procedures; hypothesis testing; estimation.

Prerequisites: 69.300 or 69.400; 41.111 or 55.411.

55.544 Advanced Management Mathematics (3)

This course provides a review of the mathematics necessary for advanced work in Operations Research. It covers sets and relations; mathematical induction; series; limits and continuity; differentiation; optimization; integration; differential equations; probability theory.

Prerequisite: 41.111 or 55.411. Not required where 41.222 and 41.223 (or equivalents) have been satisfactorily completed *recently*. This course will be required, as a prerequisite for 55.641, of students whose differential and integral calculus were taken more than ten years ago.

55.641 Methods of Operations Research I (3)

Sampling; inventory problems; replacement problems; waiting lines; competitive strategies; linear programming; sequencing; dynamic programming.

Prerequisites: 55.540; 55.542; 41.223, 55.544 (as stated above).

55.642 Methods of Operations Research II (3)

Systems and simulation; developing and using models; evaluating industrial systems; applications with stochastic processes; schedule control; market

evaluations; military, government and industrial problems.

Prerequisite: 55.641.

55.666 Cost-Benefit Analysis (3)

An examination of the techniques used to evaluate non-market oriented goods and services.

Prerequisites: 55.411, 55.544, or 41.222 and 41.223.

SEMINARS:

Prerequisite: Permission.

55.740 (or 55.745) Seminars in Operation Research and/or Management Science (3)

Offered with varying sub-subjects.

55.799 Doctoral Dissertation Seminar: Technology of Management (3-12)

55.065 SCIENTIFIC AND TECHNICAL INFORMATION SYSTEMS MS

55.550 Survey of Information Science and Technology (3)

An analytical study of the total process of, and requirements for, the effective communication of scientist-user. The types of purpose and system requirement: Institutional records; scientific, technical, and research reference; archives. The operational specifications as they derive from the end-use of the system, and their implications for original documentation, media, acquisition, abstracting, indexing, searching, and other sub-processes.

Prerequisite: 55.310 or equivalent.

55.650 Computational Linguistics (3)

An examination of the use which computers can be put in manipulation of natural language.

Prerequisite: 55.550, or equivalent.

55.651 Technical Information Machine Systems (3)

The application of machine systems with major emphasis on the handling of technical literature and data. The analysis of the individual user requirement. The capabilities of mechanized systems, both simple and sophisticated, their applicabilities, feasibilities, and optimums of design in relation to user requirements. This course also lays the groundwork for the management information systems operation which are studied in detail in field 55.66.

Prerequisites: 55.530 and 55.550.

55.653 Concepts of Indexing and Abstracting (3)

An intensive specializing course in the control processes of indexing and abstracting. The taxonomy of information organization, identification, and storage. The philosophy of topical structure and designation. The methods of reducing the content of technical writings to abstract length without losing the essential elements of information. The varieties of indexing and abstracting methods will be treated in depth, with workshop experience and case review.

Prerequisites: 55.550 or 55.660.

55.654 Workshops in Technical Information Handling (3)

Specialization and practice in the common process subsystems of technical information machine systems: e.g., acquisition, indexing, abstracting, and film media. The content will vary from semester to semester, with differing selections and combinations of process and use application. Students may repeat two or more times, providing only that content is not duplicated.

Prerequisites: 55.550 and 55.651.

55.655 Automated Library Systems (3)

An examination of the recent techniques used to apply computer principles to library problems.

Prerequisite: 55.550.

55.656 Publication Techniques (3)

A study of the several techniques used in publication.

Prerequisite: 55.550.

SEMINARS

Prerequisite: Permission.

55.750 (or 55.755) Seminars in Scientific and Technical Information Systems (3)

Offered with varying sub-subjects.

55.799 Doctoral Dissertation Seminar: Technology of Management (3-12)

55.066 MANAGEMENT INFORMATION SYSTEMS

55.560 Systems Design for Business Operations (3)

The mechanization and automation of office operations. A practical course in the capabilities, applications, and design and use of systems for handling administrative data, cases, and processes. Punch card machines; electronic computers. For accounting systems design, see SBA 10.540.

Prerequisite: 55.530.

55.561 Management of Automatic Data Processing Systems (3)

Whether the use is technical information, administrative operations, or management information, the machine system itself has to be planned, installed, and run. This course concerns: estimate of requirements; organizational arrangements; planning the total system; conversion problems; costs and performance evaluation; the executive role in achievement of integration.

Prerequisites: 55.530; 10.456 or 53.353 or equivalent experience.

55.653 Concepts of Indexing and Abstracting (3)

See 55.065 field for course description.

55.660 Management Information and Reporting Systems (3)

The decision maker's information requirement. Related system performance requirements. Design and installation of the responsive system. PERT, CPM, and similar planning and control information systems. Problems and techniques of executive use of the system product. Interaction and integration of information processing systems and institutional records systems. Workshop in the design and installation of actual and model systems.

Prerequisites: 69.400 and 55.530.

SEMINARS

Prerequisite: Permission.

55.760 (or 55.765) Seminars in Management Information Systems (3)

Offered with varying sub-subjects.

55.799 Doctoral Dissertation Seminars: Technology of Management (3-12)

55.067 RESEARCH AND DEVELOPMENT MANAGEMENT

55.570 Management of Research and Engineering Organizations and Laboratories (3)

The basic course on the internal management of the research performance organization. The full spectrum of the elements of effective management as they apply in such organization. Comparisons of general management prac-

tices, in government and business, with the situation of the research organization.

Prerequisites: For undergraduates, 54.310 or 10.481. For graduate students comparable course work or experience.

55.571 Creativity and Invention (3)

An interdisciplinary social science course directed to the understanding of creativity and invention and of the determinants of their occurrence and quality in persons and groups. The approach will combine scientific-historical case study with review of contemporary behavioral science knowledge. The practical purpose is to sensitize the R&D manager to this requisite of his organization and purpose, and to help him articulate managerial tools and policies for its maximization.

55.670 The Politics and Economics of Research and Development (3)

The magnitude, characteristics, and politico-economic significance of the R&D economy of the U.S. and, comparatively, of other countries. The structure and nature of the U.S. research industry. The government-business defense economy. Governmental non-military research. Business and industrial research. Trends and forecasts. National resources allocation, and other political and economic problems.

55.671 R & D in the Total Organization (3)

Criteria for top management decisions: (a) Capabilities of scientific, technological, and social science research; (b) utilization for needs of the specific organization; (c) definition of R&D requirements, in-house and/or external implementation, determination of budget; (d) evaluation of success and contribution to organizational objectives; (e) conversion of R&D results into governmental or business applications, products, or processes.

55.672 Scientific and Engineering Manpower (3)

A study in depth of scientific and engineering manpower stressing the role of the individual in the R & D environment and his interface with the total resources of which he is a part. The impact of the innovative forces at work. For the advanced graduate student.

Prerequisite: 55.570 and at least one other of the above R & D courses

55.673 Planning and Control of Research and Development Operations (3)

A study in depth of the role of today's research and development manager. Review of operational policies and goals. Forecasting, planning and programming techniques, analysis methodology. Exercise of "value judgments." Intended for the advanced graduate student.

Prerequisites 55.570 and at least one other of the above R & D courses.

NOTE: If 55.770 is not offered in any given semester, 55.673 will be accepted as the SGPA Master's research requirement (in lieu of thesis).

55.775 Seminar in Research and Development Management (3)

A critical review of the literature pertinent to modern R & D Management, intended to develop within the R & D executive a clear grasp of the applicability of current knowledge of problem solving. A study in depth of today's research and development manager. Intended for the very advanced graduate student.

Prerequisite: Permission.

55.799 Doctoral Dissertation Seminars: Technology of Management (3-12)

55.068 SOURCES OF SCIENTIFIC INFORMATION—ONE SCIENCE

As stated in the introductory description of comprehensive fields, this field will be available, very selectively, only to Ph.D. students who also elect 55.65 *Scientific and Technical Information Systems*. The related course work or independent study or research will depend on the particular scientific field

involved, and will be individually planned for the student on the basis of what is available from cooperating science departments in this University or the other members of the Consortium of Universities.

CENTER FOR TECHNOLOGY AND ADMINISTRATION POLICY BOARD

DR. HAROLD H. HUTSON, Provost, *Chairman*
DEAN EARL DELONG, School of Government and Public Administration
DEAN NATHAN BAILY, School of Business Administration
DEAN DONALD BOWLES, College of Arts and Sciences
DEAN RICHARD BRAY, College of Continuing Education
DR. RICHARD POWERS, Executive Secretary to the Board

FACULTY

Full-Time

RICHARD POWERS, Director, Center for Technology and Administration, and Professor of Operations Research, B.S., M.A., Ph.D., University of Virginia

THEODORE J. WANG, Professor of Operations Research and Deputy Director for Operations Research; B.S., Ph.D., University of Illinois

ISAAC D. WELT, Professor of Information Sciences and Deputy Director for Scientific and Technical Information; B.S., M.S., McGill University; Ph.D., Yale University

ALAN D. MORRIS, Associate Professor of Operations Research; B.E., Dr. Eng., Johns Hopkins University.

JAMES K. ROCKS, Assistant Professor of Information Sciences; B.A., Columbia University; M.A., Boston University

MARVIN I. ROSENBERG, Assistant Professor of Computer Systems; B.S., U.S. Naval Academy; M.S., Purdue University

Part-Time

Adjunct Professors RALPH I. COLE, B.S., Washington University; M.S., Rutgers University

HAROLD E. FASSBERG, A.B., University of Ohio; M.A., University of Pittsburgh; Ph.D., The American University

CHARLES W. FOTIS, A.B., Ed. M., B., M.S., Tufts University, Ph.D., The American University

CARL HAMMER, B.S., Luitpold Oberrealschule, Munich; Ph.D., University of Munich

PAUL W. HOWERTON, Ph.B., Northwestern University

MILOS G. PACAK, L.L.D., Pol. Sci. D., Charles University, Prague

SAMUEL ROTHMAN, B.S., Long Island University; M.A., Ph.D., The American University

Professorial Lecturers WILLIAM ALDRED, B.A., University of North Carolina; M.S., Texas A & M University

GLYNN E. BALLEW, B.S., Oklahoma State University, M.S., Texas A & M University

LESTER A. BARRER, B.S., Rutgers University; M.Sc., Yale University; M.S., New York University

RICHARD BASSLER, B.S., University of Colorado; M.S., The George Washington University.

MARTIN A. BAUM, B.S., Drexel Institute of Technology; M.S., Johns Hopkins University

MARTIN BINKIN, B.S., Washington University; M.B.A., University of Michigan

RAYMOND F. BROGAN, B.S., St. Joseph's College; M.A., The George Washington University

ROBERT O. BURNS, B.S., Knox College; M.S., Ph.D., University of Illinois

JOSEPH F. CAMPAGNA, A.B., William & Mary College

GEORGE K. CHACKO, B.Comm., Calcutta University; M.A., Madras X'an College; Ph.D., New School Graduate Faculty

STEPHEN C. CLARK, III, B.A., M.A., University of Washington; Ph.D., Yale University

STEPHEN K. DIETZ, B.E.E., The George Washington University; M.A., Villanova University

JAMES M. DIMITROFF, B.S., University of Pittsburgh; M.S., University of Louisville

WILLIAM DORFMAN, B.A., M.S., Ph.D., University of Pennsylvania

SAMUEL E. EASTMAN, B.S.E., Princeton University; L.L.B., Harvard University; M.A., University of Maryland

JERRY E. GRAY, B.A., M.S., Texas A & M University

MILTON GUSSOW, B.S., U.S. Naval Academy; B.S.E.E., U.S. Naval Post-Graduate School; M.S., Massachusetts Institute of Technology

BOBBY J. HANSEN, B.S., University of Oklahoma; M.A., The American University

FREDERICK G. HAROLD, B.S., College of Wooster

ROY HERRMANN, Dr. Rerum Politicarum, University of Rostok

WILLIAM J. HILSMAN, B.S., U.S. Military Academy; M.S.E.E., Northeastern University

PAUL J. HYMAN, B.S., Cornell University; M.A., The George Washington University

HAROLD R. JOHNSON, B.S., University of Maryland; M.S., The George Washington University

JEROME S. KAMCHI, B.I.E., New York University; M.B.A., Temple University

WALTER J. KENNEVAN, B.C.S., M.C.S., M.F.A., Catholic University

M. HOWARD KRAMER, B.E.E., Rensselaer Polytechnic Institute; M.E.E., New York University

ROBERT M. LANDAU, B.S.E.E., Indiana Technical College; L.L.B., B.S., M.P.A., The American University

RICHARD A. LEJK, B.I.E., Georgia Institute of Technology; M.S.E., University of Michigan; Ph.D., Texas A & M University

EDWARD M. MC CORMICK, B.S., M.S., Kansas State College of Pittsburg

DANIEL W. MC ELWEE, B.S., St. Joseph's College; M.A., The George Washington University

LAWRENCE L. MCGOWAN, B.S., University of Omaha; M.S., Texas A & M University

DONALD J. O'ROURKE, B.A., California State College at Los Angeles; B.A., Sacramento State College; M.A., The American University

CHARLES R. PACK, B.S.E.E., Virginia Military Institute; M.S.M.E., Rensselaer Polytechnic Institute; M.S.I.E., Stanford University

FARRELL G. PATRICK, B.S., U.S. Military Academy; M.A., Ph.D., The American University

JIMMIE M. PORTER, B.A., University of Kentucky

BERNARD RADACK, B.S., City College of New York; M.A., Syracuse University

JAMES V. REESOR, B.S., Western Kentucky State College; M.B.A., Michigan State University

MAURICE F. RONAYNE, B.A., Colby College; M.A.; The American University

FRANK P. RYMER, JR., B.S., University of Omaha

LEON SCHARFF, B.S., College of the City of New York; B.S.E.E., Massachusetts Institute of Technology; M.S.E.E., University of Maryland

S. JOSEPH SCHNEIDER, B.S., Long Island University; M.A., New York University

LEWIS I. SCHWARTZ, B.A., The George Washington University; M.A., The American University

GORDON T. SHAHIN, B.S., M.B.A., University of Buffalo; M.S., Syracuse University; Ph.D., Ohio State University

T. ARTHUR SMITH, B.A., M.A., The George Washington University

MURRAY SPITZER, B.S.C.E., Georgia Institute of Technology; M.S., Stevens Institute of Technology

TOBEY J. TEOREY, B.S., M.S., University of Arizona

ELIAS VAN KRUGEL, B.A., M.A., The George Washington University

ERNST VOLGENAU, B.S., U.S. Naval Academy; M.S., Air Force Institute of Technology; Ph.D., University of California at Los Angeles

JOHN W. WALDEN, B.S., U.S. Naval Academy; M.S., U.S. Naval Post-Graduate School

DAVID C. WEEKS, B.A., McGill University; M.A., Ph.D., University of London, Kings College, England

ROBERT A. YORKS, B.S., Pennsylvania State University

KENNETH O. YUNG, B.S.M.E., University of Buffalo; M.E.A., The George Washington University

Lecturers ROBERT BARRETT, B.A., University of Nevada; M.B.A., University of Arizona

DOUGLAS N. BEATTY, B.S.E., M.S.E., Princeton University

JOHN A. BIELEC, B.A., M.A., University of Maryland

ROBERT L. BLAKE, B.S., Long Island University; M.P.A., Syracuse University

ROBERT U. BOWMAN, B.A., Michigan State University; M.C.S., Texas A & M University

JAMES C. CRINER, B.A., University of Arkansas; M.S.Engr., Arizona State University

JAMES A. CROSS, B.A., California State College

DAN R. DAVIS, B.S., Rensselaer Polytechnic Institute

FERDINAND P. DIEMER, B.E.E., Cooper Union University; M.E.E., New York University

NORMAN R. ENGER, B.A., College of the City of New York; M.A., Columbia University

MARY JANE FABIK, B.A., University of Illinois; M.S.L.S., Catholic University

LOUIS H. FISLER, B.S., U.S. Naval Academy; M.S., U.S. Naval Post-Graduate School

JAMES P. FLANNERY, B.A., St. Francis College; M.A., The American University

THOMAS J. FREANEY, JR., B.A., Temple University; L.L.B., Catholic University

ERNEST FREEMAN, B.S.E.E., University of Miami; M.E.A., The George Washington University

JOHN A. GILBERTO, B.S., Boston College

ROBERT S. GLEASON, B.S., University of Maryland; M.A., The George Washington University

JOHN P. GLENNON, B.A., King's College; M.A., University of Scranton

NORMAN S. GLICK, B.A., Harvard University; M.A., The American University

BARRY H. GROSS, B.S., Drexel Institute of Technology

MICHAEL PATRICK GYAUCH, B.S., Loyola University of Los Angeles; M.S., University of Michigan

AUBREY M. HERZIK, B.S., Southwest Texas State College; M.S., Texas A & M University

JOSEPH JARECKI, L.L.B., Woodrow Wilson College of Law

BRUCE JOHNSON, B.S., Oklahoma State University

MARTIN T. KALLIGHAN, B.S., Indiana University; M.B.A., Michigan State University

GEORGE J. KOBACK, B.C.S., M.C.S., Benjamin Franklin University; M.F.A., Columbus University

JOSHUA KRAMER, B.A., The George Washington University; M.A., Syracuse University

JOSEPH H. KUNEY, B.S., University of Chicago; M.A., The American University

WILBUR C. LUSK, B.S., University of Southern California at Los Angeles

VLADIMIR MARINICH, B.A., City College of New York; M.A., New York University

ROBERT D. MASON, JR., B.A., The American University

- DONALD V. MATHUSZ, B.S.E., Syracuse University; M.M.E., Rensselaer Polytechnic Institute
- GERALD R. MC NICHOLS, B.S., Case Institute of Technology; M.S., University of Pennsylvania
- NEIL P. MILLER, B.A., University of California at Berkeley; B.A., Southern Colorado State College; M.S., U.S. Naval Post-Graduate School
- THOMAS J. MULLER, B.S., Pennsylvania State University; M.S., Stevens Institute of Technology
- WILLIAM C. MULRONEY, B.A., Ohio Wesleyan University; M.P.A., The American University
- JEANNE M. MURRAY, B.S., Morris Harvey College; M.S., Georgia Institute of Technology
- THOMAS H. MURRAY, B.S., Illinois Institute of Technology; M.S., Georgia Institute of Technology
- HUGH V. NAUGHTON, B.A., De Pauw University; M.B.A., The George Washington University
- RICHARD R. OEHLER, B.A., St. John's University
- JAMES L. OPENSHAW, B.S., Drexel Institute of Technology; M.S., Massachusetts Institute of Technology
- DONALD E. OPPERT, B.S., The George Washington University; M.S., Harvard University
- DOUGLAS R. PADEN, B.A., Miami University
- ROSS A. PARK, B.A., M.S., Texas A & M University
- JOHN R. PETTIT, B.A., Niagara University; M.A., St. John's University
- WILLIAM G. PFEIFFER, B.S.C., Loyola University; M.P.A., The American University
- THOMAS D. PHALAN, B.A., Hunter College, Bronx, N.Y.; M.A., American University
- GEORGE E. PRICE, B.S., U.S. Naval Academy; M.S., University of Illinois
- WILLIAM E. RINK, B.A., St. Ambrose College
- RICHARD S. ROBERTSON, B.S., University of Texas; M.S., U.S. Naval Post-Graduate School
- CHARLES M. ROBINSON, B.E.E., Vanderbilt University
- LINUS F. RUFFING, B.S., The George Washington University
- STANLEY B. SACHAR, B.S., Rensselaer Polytechnic Institute; M.S., Massachusetts Institute of Technology
- ALFRED T. SAWICKI, B.M.E., Polytechnic Institute of Brooklyn
- LARRY I. SCHWARTZ, B.S.I.E., M.S.I.E., University of Florida
- DENNIS G. SEVERANCE, B.S., Polytechnic Institute of Brooklyn; M.A., University of Michigan
- HAROLD L. SHAKLEE, B.S., M.A., Oklahoma University
- ALLEN F. SHAPIRO, B.S., M.B.A., University of Maryland
- BERNARD E. SHIPLEY, B.S., District of Columbia Teacher's College; M.A., The American University

DONALD E. SKILLINGS, B.S., Panhandle Agriculture and Mechanical College;
M.S.E., University of Michigan

FORREST C. SNELL, B.S.E.E., Ohio State University; M.B.A., Florida State
University

THOMAS L. SOPWITH, B.A., M.B.A., University of Oregon

EDWARD STILES, B.A., Oberlin College; M.S., Columbia University

JAMES V. TAGUE, B.A., Pennsylvania State University

ROBERT N. TAP, B.S.E., M.S., University of Michigan

JAMES T. TIPPETT, B.S.E.E., North Carolina State University

LAWRENCE L. VERJINSKI, B.S., University of Portland

RICHARD D. WARREN, B.Mgmt.E., Rensselaer Polytechnic Institute; M.B.A.,
The American University

DAVID WEINSTEIN, B.E.S., Johns Hopkins University

IRVIN J. WEISS, B.S., M.B.A., Temple University

RAYMOND P. WISHNER, B.S., Northwestern University; M.A., Duke Uni-
versity

HERBERT H. WOOD, B.S., Oklahoma University; M.S., U.S. Naval Post-
Graduate School

SCHOOL OF GOVERNMENT AND PUBLIC ADMINISTRATION

CONCEPTS AND PROGRAMS

The School of Government and Public Administration has been made a separate school in the organization of The American University in order to emphasize and take best advantage of the special opportunities of the Washington, D.C., location for the teaching and study of these subjects. The school seeks to share the special educational and research possibilities of this location with the student body of The American University and with the students and faculties of other educational institutions throughout the United States and the world.

The fundamental educational goal of the School is to give each of its students the knowledge, the framework of moral values, and the motivation to fulfill better his personal role in the universal obligations of democratic citizenship. Beyond this the School seeks to provide special elements of knowledge, perspective, and social ideals which are needed by those who will participate, by teaching or action, in the politics, policies, or administration of government.

The Academic Educational Program

The teaching function, undergraduate and graduate, is the first obligation and emphasis of this School. The undergraduate program is designed and scheduled for the full-time, daytime, undergraduate student, and the requirements for the undergraduate Political Science major *cannot be completed* on a part-time evening basis. The graduate program is designed and scheduled for both the full-time graduate students and the part-time graduate student who is limited to evening classes.

THE UNDERGRADUATE PROGRAM will contribute an understanding of government and public affairs as an aspect of a broadly cultural education. It will, additionally, prepare the American student for an enlightened role in American national or community affairs, or the foreign student who intends a comparable role in the country of his origin or adoption. This program will aid those students who major in other subjects for careers which tangentially involve government and public affairs. It will provide the subject matter content for those preparing for teaching careers in government and political science at the secondary level. This program may be a professional education which prepares the student for entrance upon a career in government at a junior professional level. It will provide a solid and comprehensive foundation for the student who pursues more specializing education before entering a career in public affairs or politics, governmental administration, or in teaching or research in these subjects.

THE GRADUATE STUDY PROGRAM is an opportunity for intensive academic or professional education for careers of teaching, research, or action in the fields of Politics and Government, Public Administration and Management, or the Technology of Management in its governmental aspects. For the objective of college and university teaching graduate study in this School will prepare for a first career or, equally for a new career direction. This program will prepare for the research which is a central element of an academic career, or for the increasingly possible research career in non-academic research institutions. Except for careers in foreign policy and international relations, which are the province and role of the School of International Service, the curriculum of this School comprehensively affords preparation for a wide variety of active careers in political, administrative, or other aspects of governmental or public service. For the person who is already well established in one or another of these career patterns, this curriculum can up-date him in the trends and changes in the areas of his responsibilities, or can give him the new perspectives and skills which he may need for a broader and higher future responsibility.

In all aspects of these education programs, the full-time resident faculty is the foundation, but it is supplemented by an excellent and exceptionally versatile and able part-time faculty which is selectively used for those courses in which its specialties will enhance the coverage and quality of the academic offering. In this respect, the Washington area is unusual, not only in the very large number of people who are highly qualified for such part-time faculty service, but also in the extraordinary degree to which these people are willing to make themselves available for such service.

The Research Program The School of Government and Public Administration believes that these propositions are fundamental in the present and future relation of political science research to government, to academic institutions, and to educational graduate programs:

To be a truly sophisticated preparation for the student's future, a modern graduate study program must be intimately interwoven with the processes, the facilities, and the products of creative scientific probing of the research frontier.

In political science, no less than in scientific, technological, and other social science fields, the research of the future will increasingly be carried out under the interdisciplinary team concept, with the increasing admixture of the physical and bio-sciences as well as the other social sciences.

A comprehensive and penetrating understanding of the potentials, the processes, and the limitations of research has become imperative for the practitioner of governmental affairs as well as for the teacher or researcher. The future practitioner will be helpless without the support of research and, to obtain it, he will need to appreciate and define his requirements. The present student who is the future researcher will need to fulfill standards of competence and creativity of increasingly higher rigor. The teacher has much to do to produce the people who will fulfill the demanding requirements of the practitioner and the researcher.

Through a developing structure of University centers, this School expects increasingly to provide its graduate students, and its faculty as well, with opportunities to fulfill these requirements.

In its existing CENTER FOR TECHNOLOGY AND ADMINISTRATION, the University has a going organization of substantial experience and of substantial academic, research, and service capability in the whole general field of the dramatically new Technology of Management, including the information and managerial revolutions, the impact of technology on administration, machine intelligence, and the technical specifics of the field of automatic data processing. This is an extraordinary opportunity for the research experience which the contemporary graduate student requires.

The American University is working actively to develop further centers in the fields of government-business relations, labor relations, the problems of the planning and government of metropolitan areas, and the politico-economic problems of the developing nations. These, as they develop, will be designed and used to fulfill the research component of the graduate student program requirement.

There are scores of governmental and non-governmental research organizations in the Washington, D.C. area. These constitute extensive opportunities for internships and employment for those graduate students in the School who have the beginnings and need the disciplined intensification of experience in the conduct of complex and important research effort in socio-political or administrative affairs.

The University, the School of Government and Public Administration and the special centers which will administer research effort will be available for research tasks which lie within these general areas and are consistent with the educational values and objectives of the institutional research interest. The University is not interested just in performance of routine research service and will exclude research possibilities which do not further integrally its educational purposes and the intellectual development of the research participants.

The Educational Cooperation Program

The School of Government and Public Administration will do everything possible, within its capabilities and resources, to share the special opportunities of the Washington, D.C., location with other schools and departments of political science, government, and public administration throughout the country, and the world. In this respect, although necessarily without prior commitment, it will cooperatively consider the performance of any kind of service which will cut the intellectual distance between a sister educational institution and Washington, D.C., in educational and research affairs. The regularly organized aspects of this interest and effort include the following activities:

THE WASHINGTON SEMESTER: By which selected students, from schools which enter formal participating agreement, spend one semester of their junior or senior years in academic residence in the School of Government and Public Administration in a specially designed academic program of familiarization in the affairs of the Federal Government. The Schools which participate in this program are listed on page 336.

THE WASHINGTON SEMESTER SUMMER SEMINAR AND THE URBAN AFFAIRS LABORATORY: By which, through individual registration or inter-institutional agreement, undergraduate and graduate students or faculty members of other schools may spend a summer term in Washington in individualized directed study in Federal Government or urban studies.

COMPARATIVE GOVERNMENT WORKSHOP ABROAD: Organized group study overseas, in selected areas to be determined and varied from time to time on the basis of need and opportunity. This may occur in the summer or during the regular academic year, as required by demand and permitted by resources.

THE WASHINGTON GRADUATE YEAR: Through which the School of Government and Public Administration will provide educational counsel direction, and facilities, in academic *loco parentis*, for students pursuing graduate study or research under registrations in other graduate schools.

FACULTY EXCHANGES: The School of Government and Public Administration will try, from time to time as it may be able, to work out arrangements by which its faculty members may exchange places for one year with faculty members of other institutions who have exchangeable teaching interests.

SABBATICAL ASSISTANCE: When faculty members of sister institutions wish to spend a sabbatical period in Washington, D.C., the School of Government and Public Administration will be pleased, within its capabilities, to provide them with office and library services and intellectual fellowship and assistance.

RESEARCH COOPERATION: If a sister academic institution or a research organization is engaged in a research task within the criteria of the University's research interests and within its potential for helpful cooperation, the School of Government and Public Administration invites discussion of the possibility.

The Public Service Program INSTITUTES AND WORKSHOPS: In addition to the academic program of the regular educational curriculum, the School of Government and Public Administration and the related University study centers conduct a continuing program of special training institutes and workshops.

These may be given on a short period, full-time basis, or with spacing over more extended time.

The general criteria for the offering of such institutes and workshops are these: The subject must be an intellectually and professionally worthy problem which can be presented within the capability of the regular faculty or of *ad hoc* experts associated for the purpose under the direction of the faculty. The activity must be self-supporting except as prior underwriting is assured for any margin of shortfall in this respect.

Such an activity may be undertaken for and in cooperation with a governmental or non-governmental organizational entity which arranges for it in furtherance of its own organizational purpose, or it may be organized by the School for unorganized people who have a common interest and requirement.

These activities may be offered with simply a certificate of completion or achievement without academic credit, or with academic credit

if they have been evaluated by the academic authority of the University as fulfilling the time and quality criteria for such credit.

The School invites inquiries from those who have a requirement for this type of service.

CONSULTATIVE AND ADVISORY SERVICE: The members of the School faculty and the related special centers represent a wide variety of expertise in matters of public, political, and administrative affairs. Insofar as possible without interference with academic commitments, it is the policy of the School and the University to encourage faculty and staff members to provide professional consultation and advice on the basis of individual arrangement.

For those public, eleemosynary, or governmental organizations and activities which are fully and truly public in interest and purpose, this School, in matters of special significance and merit and subject to its own basic obligations and commitments, may assume institutional responsibility for the provision of consultative and advisory service. Such effort may variably be with or without reimbursement, depending on the character and merit of the instance and the capability at the time.

SPECIAL ASSISTANCE FOR FOREIGN OFFICIALS AND ACADEMICIANS: The School recognizes the special problems of foreign officials and academicians who come to the United States to seek methods and solutions for their own political and governmental problems. If the School can design special academic programs for their needs, it will do so, but with or without such academic relationship, the School will assist and consult with them to the extent of its capabilities.

This includes a special program of studies in Applied Administrative Management, which may carry from 3 to 9 hours of academic credit for students who have an adequate academic foundation and proficiency in English. This program is open to foreign governmental administrators, operating officials, and staff officers. It is limited to participants who are assigned by the Agency for International Development, or by foundations and other organizations which sponsor foreign officials for training programs in the United States.

THE GOVERNMENTAL CAREER COUNSELING PROGRAM: As an integral aspect of its academic program, the School will counsel its own students, and those of other institutions with which it has formal educational cooperation arrangements, with respect to their capabilities, their ambitions, and their career development requirements.

Within its capabilities, the School will attempt to provide such counseling for non-students of a professional level of attainment or of pre-professional interests, but it reserves the possibility of need to charge a fee for such service if the volume of requests should become an interfering drain on faculty time and institutional resources.

Washington Semester The Washington Semester is a cooperative arrangement between The American University and more than ninety accredited colleges throughout the United States. As part of the University's professional work in government, one hundred undergraduate honor students come to the School from participating colleges and universities. Washington Semester students study with government officials and take guided field trips to various government agencies, bureaus, and departments. Their

semester in Washington culminates in a research paper. In addition, the student is enrolled in regular courses at the University. These major curriculum features are planned to provide an individually integrated program for each student, to give him greater insight into our national government, and a familiarity with the sources for study of specific governmental problems.

The School of Government and Public Administration administers the Washington Semester. The participating colleges are grouped into units. Students from each unit are individually advised and directed during the semester by an academic director whose primary responsibility is the conduct of the Washington Semester for his unit.

Cooperating institutions include:

Albright College	Hiram College
Alfred University	Hobart and William Smith College
Allegheny College	Hollins College
American University	Hope College
Augustana College	University of Houston
Austin College	Hunter College
Baldwin-Wallace College	Illinois Wesleyan University
Beloit College	Iowa Wesleyan University
Birmingham-Southern College	Juniata College
Bucknell University	Kansas State University
Carleton College	Kansas Wesleyan University
Carnegie-Mellon University	Knox College
Carroll College	Lehigh University
Case-Western Reserve University	Herbert H. Lehman College
Centenary College of La.	Le Moyne College
Centre College of Ky.	Lindenwood College
Chatham College	Luther College
University of Cincinnati	Lycoming College
Clark University	MacMurray College
Concordia College	Maryville College
Cornell College	Millikin University
Davidson College	Millsaps College
Davis and Elkins College	Monmouth College
Denison University	Montana State University
DePauw University	Morningside College
Dickinson College	Moorhead State College
Doane College	Muskingum College
Drury College	Nebraska Wesleyan University
Elmhurst College	North Central College
Elmira College	Occidental College
Emory University	Ohio Wesleyan University
Florida Southern College	Oklahoma City University
Franklin College	Otterbein College
Gettysburg College	Park College
Grinnell College	Pomona College
Hamline University	Queens College
Hanover College	Randolph-Macon Women's College
Hartwick College	University of Redlands
Hastings College	Rockford College
Heidelberg College	St. Andrew's Presbyterian College

St. Olaf College
 Seton Hill College
 Simmons College
 Simpson College
 Southwestern College
 Stetson University
 Susquehanna University
 Sweet Briar College
 Thiel College
 Tougaloo College
 Transylvania College
 Union College
 Valparaiso University

Wabash College
 Washington College
 Wesleyan University
 Western College for Women
 Westminster College (Mo.)
 Westminster College (Pa.)
 Westminster College (Utah)
 Wheaton College
 Willamette University
 Wilmington College
 Wittenberg College
 Wooster, The College of

STUDENT ACTIVITIES

For information on student activities, see the forepart. The following are activities that will be of special interest to students in the School of Government and Public Administration.

Political Science Honorary Fraternity Beta Psi Chapter of Pi Sigma Alpha, national political science honorary fraternity, was chartered at The American University in 1955. Undergraduates with junior standing with "B" average and graduate students with better than a "B" average and a minimum of twelve semester hours of courses in government, public administration and international relations are eligible for election to membership in the fraternity. Pi Sigma Alpha sponsors public lectures in the field of government and public administration and other projects. It is an especially important organization for the graduate student of the School.

Society for Advancement of Management An active student chapter of the Society for Advancement of Management provides an opportunity for student majors in public administration and business administration to come together in the study of management. Activities of the Chapter include field trips, special projects and social events.

Area Professional Associations Many national professional associations have Washington area chapters. Students are welcome to attend their meetings and participate in other program activities. Among them are the American Political Science Association, the American Society for Public Administration, the Society for Advancement of Management, the American Public Relations Association, the Society for Personnel Administration and the Public Personnel Association.

THE UNDERGRADUATE POLITICAL SCIENCE PROGRAM

Degrees This program leads to the degree of Bachelor of Arts in Political Science.

The School of Government and Public Administration no longer offers the program and degree of Bachelor of Science in Public Administration. The faculty of the School believes that a broad foundation in Political Science is the best undergraduate preparation for a career of teaching, research, or practice in the field of Public Administration, and that specialization in the field should come at the graduate level.

The curriculum will include a few courses available to undergraduates in the subject of Public Administration, for use exclusively in special programs, such as the curriculum in police science, for part time and off-campus students.

The program and degree of Bachelor of Arts in Political Science are available through registration in the School of Government and Public Administration *or* in the College of Arts and Sciences. In this Political Science major program as set forth below, there are slight differences between the SGPA and the CAS programs. These are clearly specified in the body of the program. The CAS student will also have some other requirements which do not apply to students in SGPA.

Admission and Retention Requirements Requirements for admission to or continuation in this undergraduate program in this School are the same as for students in the College of Arts and Sciences.

University Requirements Political Science majors, whether in SGPA or CAS, are bound by the general University Requirements stated in the General Information Section of this catalog. See page 29.

School or College Requirements For Political Science majors who are registered in SGPA, the School has no additional requirements except the features of the Political Science major program as defined below. Political Science majors in CAS will be responsible for certain additional requirements, such as foreign language, as prescribed by that College.

Foreign Language Course Regulation Undergraduate students majoring in the School of Government and Public Administration are not required to take foreign language. However, if a student wishes, he may.

It is necessary to complete successfully the second session of a beginning or intermediate foreign language course to receive academic credit for the first session of the same course. Academic credit is not awarded for a single session of language study at these levels. This includes beginning and intermediate intensive language courses.

Graduate Record Examinations The School of Government and Public Administration does not require its graduating seniors to take any portion of the Graduate Record

Examinations. However, many graduate schools throughout the United States do require such examinations as a condition of consideration for admission. Graduating seniors who may later decide to undertake graduate study would be wise to take some or all of the tests of the Graduate Record Examinations. The Director of Testing and Guidance should be consulted for advice on which tests to take for the individual student's needs.

Students who hope to enter the employment of the United States Government should know that high score in the Aptitude Test of the Graduate Record Examinations will be accepted in lieu of the Federal Entrance Examination as a basis for consideration for Federal employment. Such students also would do well to take this Test.

At the beginning of the fall semester, seniors who wish to take such examinations should write directly to The Educational Testing Center, Princeton, New Jersey, for information about the times and places for taking such tests in the Washington, D. C. area.

Outline of the Political Science Major and Program Related Requirements

All majors in Political Science, whether in SPGA or CAS, will look to the Associate Dean of the School of Government and Public Administration, and the SPGA faculty advisers who assist him, in the development of their programs.

For the SGPA Political Science major, the program outlined here is a 54-hour package. For the CAS Political Science major, it is a 51-hour package. If completed in the terms described, either of these major program patterns will cover:

Honors Program By student application, and by selection by the Associate Dean of SGPA during the student's junior year, American University Political Science majors may take two honors courses (56.498, 56.499) for six hours during the senior year. Students so selected and registered may substitute this honors track for any one of the three 6-hour sequences required under paragraph 2. Fields of Specialization (page 340). With successful achievement, such students will receive their bachelor's degrees with Honors.

For selection, the student must have, in course work taken prior to the selecting decision, a 2.0 average in all course work, and a 2.25 average in all course work taken under the requirements of this Political Science Major Program structure. The two courses (56.498, 56.499) constitute this honors opportunity. They will normally be taken in the order listed, one each semester. With the approval of the Associate Dean of SGPA, they may be taken concurrently in the same semester. Both courses are offered every semester.

Requirements The general University Requirement of 30 hours consisting of the following:

- 6 hours of English Composition
- 12 hours of Humanities
- 12 hours of Science

four one-semester Physical Education units, no credit

The Political Science and International Relations foundation course consisting of 15 hours.

The political Science major consisting of 21 hours.

The related Social Science requirement of 18 hours.

The further electives required to complete 120 hours.

(This does *not* include any general requirements by CAS of its own students.)

POLITICAL SCIENCE MAJOR

This program for the Political Science major is outlined here, and given in detail in the full undergraduate curriculum following:

1. FOUNDATION COURSES: All 15 hours required.

53.100 Modern Government 33.200 Introduction to World Politics

53.150 U.S. Political System I 53.300 Research and Political Science

53.250 U.S. Political System II

2. FIELDS OF SPECIALIZATION: 18 hours required.

(a) 6 hours in each of three fields, or

(b) 6 hours in each of two fields, and 3 hours in each of two others, or

(c) (for students who are selected for the senior honors track) 6 hours in each of two fields and six hours in honors courses 56.498 and 56.499

A) Theory of Politics and Government

53.310 Political Theory I

53.410 Political Theory II

B) Foreign and Comparative Government

53.330 Comparative Government I

53.430 Comparative Government II

C) International Relations

One or two of the student's three fields may be chosen from these three pairs of International Relations courses. If the student elects two of these fields, no further International Relations courses may be applied to the requirement of "4. Related Course Requirements".

33.400 Introduction to International Law

33.440 Introduction to International Organization

33.302 Foreign Policies of the Great Powers

33.430 American Foreign Policy

Introduction to an Area (33.414, 33.410, etc.)

International Relations of that Area (33.429, 33.425, etc.)

D) Public Law and Legal System

53.350 U.S. Constitutional Law I

53.450 U.S. Constitutional Law II

E) The Political and Electoral System

53.351 Political Dynamics

53.451 Political Parties and Interest Groups

F) National Policy Processes

53.352 Legislative Process

53.452 National Executive

G) Administrative System

53.353 Administrative Process

53.453 The Bureaucracy

H) The Metropolis

53.354 Government and the Metropolis

53.454 Metropolitan Political Systems

I) * Government and the Social Order

*53.355 Government, Economics, and the Social Order

*53.455 Problems in Economic and Social Policy

3. A ONE-COURSE CHOICE FOR SGPA SENIORS: 3 hours. (Not required of CAS students.)

53.400 Research and Political Science II

53.401 Senior Research Seminar

53.460 Perspectives in Government and Politics

4. RELATED COURSE REQUIREMENTS:

For SGPA students: 18 hours, required of all Political Science majors in courses outside of SGPA. These may be courses in any other social science subjects or in statistics, but not more than six hours may be taken in any one of the subjects of statistics, international relations, technology of management, or public administration.

For CAS students: 18 hours to include the following specific courses:

19.100 Introduction to Economics I (3)

19.101 Introduction to Economics II (3)

And 12 additional hours of History or Economics courses at the 300-level or above.

GRADUATE STUDY

Degree Programs The School of Government and Public Administration offers the following graduate degree programs:

Master of Arts in Government

Master of Arts in Public Administration

Master of Arts in Public Administration: Technology of Management

Master of Public Administration

Master of Public Administration in Urban Affairs

Master of Public Administration: Technology of Management

Doctor of Philosophy in Government

Doctor of Philosophy in Public Administration

Doctor of Philosophy in Public Administration: Technology of Management

The MA programs are academically oriented, as the beginnings of graduate specialization and as foundations to prepare for and test for continuation into doctoral level study. All MA students must take 53.610: *Theory and Method of Political Research-I* and two research seminars.

The MPA programs are professionally rather than academically oriented, intended as preparation for the practice of the specialty rather than for teaching or doctoral continuation. The MPA form is strongly recommended as the preferable pattern for most Master's level students in Urban Affairs and Technology of Management. MPA programs require only one research seminar and do not require 53.610, although the total program requirements will equal or exceed those for the MA.

* Applicable only as electives for CAS students.

Students who complete an MPA program may continue into doctoral study, if otherwise admissible, but they will be required to make up the additional requirements.

The PH.D. programs are intentionally academic in emphasis and orientation, in the sense that they are designed as education for graduate-level college teaching and research. Coincidentally, they are intensive professional specializations which apply in the operations of government and political affairs as well as in academic teaching and research. The PH.D. graduate of these programs will be aided in the performance of governmental executive responsibility, but they are not intended as executive development programs and should not be undertaken specifically as such.

**A special caution
for foreign
students**

SPECIAL CONSIDERATIONS FOR POTENTIAL FOREIGN GRADUATE STUDENTS: The School of Government and Public Administration welcomes applications for graduate study from qualified students from other countries. The School will make every possible effort, within its resources, to provide the special counseling and instruction which may be required to improve their possibilities for success in such programs. It offers special programs in public administration which are designed especially for, and limited to, foreign officials and students. Certificates of achievement are offered in these special programs. They do not lead to the master's or doctoral degrees, and they avoid many of the problems which confront the foreign student who enters a program of regular graduate study.

In the experience of this School, many foreign students in the regular academic graduate degree programs have not fulfilled their seeming academic potential. This School is making a strong effort to reduce this problem, and it hopes that an understanding of the causes may help the potential foreign student to avoid it. Unless the student is fully prepared and ready for graduate degree study, he risks the waste of his time and resources and the possibility of serious injury to his hopes and ambitions.

The potential foreign graduate student is urged to realize that a very high level of mastery of English is essential. A level of possession of English which is even fluently adequate for social and reading purposes will not be sufficient. A solid academic foundation in the subject area to be studied is a necessity. As a consideration particularly for the foreign student who comes from a non-Western culture, it is equally imperative that he have the foundation of *thorough* acculturation in the intellectual style of Western culture. If he is not easily able to understand how his instructors think, not just what they say, he is not yet prepared.

As the foreign student is considered for admission to this School, he will, in most cases, be admitted only provisionally, with the requirement of at least a semester in residence to provide an opportunity for careful assessment of the adequacy of preparation for graduate degree study. If he is found unready, he may be required to go through an extensive program of intellectual and language preparation before he will be further considered for admission to a graduate degree program. In some circumstances, a supplemental tuition charge may be required to cover the additional burden of faculty time and attention which may be necessary to provide adequate academic assistance before

or after admission to degree study.

**Time limits for
completion of graduate
degree programs** See page 43.

Unless it was part of a completed degree program, graduate work taken more than twelve years before admission or readmission will not be applied or accepted by transfer.

**Required Graduate
Registration** See page 42.

If any student has been inactive for more than five years, he may normally expect to have to retake comprehensive examinations, even if previously passed, and he may be required to retake some or all of the course requirements for his program.

GRADUATE DEGREE PROGRAM REQUIREMENTS

General Requirements for Master of Arts and Master of Public Administration Programs

See page 29 for general University requirements for Master's degree programs. The following SGPA requirements also apply for the SGPA Master's level programs

**MA-MPA admission
requirements** Candidates applying for consideration for admission to the MA or MPA program must have an undergraduate record of 1.5 overall on a 3.0 scale, with 2.0 in the major. Subject to a 20% ceiling on provisional admissions, provisional admission may be granted on a lower undergraduate record, or on the basis of 12 hours with a better-than-B average of relevant graduate work, including non-degree work.

For students who are not admissible to these Master's programs in these terms, or who do not wish to undertake the full load of Master's program requirements, the College of Continuing Education offers graduate certificate programs in Urban Affairs and in the various specialties under the Technology of Management program. See page 315. These certificate programs are less demanding in admission and performance requirements, and in course work requirements, as compared with the Master's degree programs. For an applicant who does not meet the requirements for Master's program admission, an impressive performance in a certificate program will be a basis for reconsideration.

**Foundation course
requirements** A background of relevant undergraduate preparation is preferred, but not required. The insufficiently prepared student may have to take from 3 to 18 hours of intensive preparation courses as foundation makeup, depending on his particular program and his own academic history. These foundation courses may be graduate courses with graduate credit, or special or undergraduate courses without graduate credit. If required,

they are additions to the minimum course and seminar requirements stated below.

For the various Master's degree programs, these foundation requirements are the following courses, or acceptable equivalents:

MA IN GOVERNMENT

- 53.600 Political Thought of the Modern State (3)
 - 53.630 Graduate Introduction to Comparative Government and Politics (3)
 - 53.650 Graduate Survey of American Government (3)
- One three-hour international relations course of .500 level or higher.

MPA IN URBAN AFFAIRS

- 53.650 Graduate Survey of American Government (3)
 - 53.653 American Federalism (3) (or a course in urban government)
 - 54.600 The Administrative State (3) or 54.610 Modern Public Management-I (3)
- One graduate course in political dynamics.

MPA AND MA IN PUBLIC ADMINISTRATION

- 53.650 Graduate Survey of American Government (3)
- 53.670 Constitutional Law and the Supreme Court (3) or 53.672 Administrative Law and Process (3)

One graduate course in each of two of: political theory, political dynamics, psychology.

or

- 53.650 Graduate Survey of American Government (3)
- 53.310 Introduction to Data Processing (0)
- 55.411 Introduction to Management Mathematics (0)
- 69.400 Managerial Statistics (0)

Although these two group of courses are optional alternatives under current SGPA requirements, all public administration students are strongly advised to include 55.310, 55.411 (or 41.110 and 41.111), and 69.400 (or 69.202 and 69.300) in their programs and, in addition, 10.400: *Use of Accounting Methods* (no graduate credit). These subjects are increasingly necessary as basic tools of education and practice in public administration.

MPA: TECHNOLOGY OF MANAGEMENT

MA IN PUBLIC ADMINISTRATION: TECHNOLOGY OF MANAGEMENT

53.650, 55.310, 55.411, and 69.400, as above, plus 54.610: Modern Public Management (3).

Although it is not a requirement, students in these programs are also strongly urged to include 10.400: *Use of Accounting Methods* (0).

If a student elects a comprehensive field in Computer Systems (55.63) and if he does not have academic work or extensive experience in computer programming, he will need a no-graduate-credit course 55.412: Computer Programming, or equivalent.

If the student elects a comprehensive field in Operations Research (55.64), he will need 41.222 and 41.223: Differential and Integral Calculus (4) (4), or equivalents.

**Minimum course
and seminar
requirements**

These Master's degree programs require a minimum of 30 or 33 graduate course and seminar hours as follows, not including any courses which may be taken as foundation or prerequisite requirements:

ALL MA PROGRAMS REQUIRE: 53.610: *Theory and Method of Political Research-I* (3 hours); one or two further courses as general requirements (3 or 6 hours); three courses in each of two comprehensive examination fields (18 hours); one research seminar in each of two comprehensive fields (6 hours). Total—30 or 33.

THE MPA IN URBAN AFFAIRS REQUIRES: Internship or Public Affairs Laboratory (6 hours); one sociology course (3 hours); three courses in each of two comprehensive examination fields (18 hours); one research seminar in one comprehensive field (3 hours); one elective (3 hours). Total—33.

FOR THE MA OR MPA: TECHNOLOGY OF MANAGEMENT: Two or three basic courses as general requirements (6 or 9 hours); three courses in each of two comprehensive examination fields (18 hours); one research seminar in one comprehensive field (3 hours); one elective (3 hours). Total—30 or 33.

**MA-MPA
comprehensive
examination
requirements**

All MA and MPA programs require two comprehensive fields, as specified above, with a written examination in both at the end of completion of course and seminar requirements. These fields are listed on page 348. The graduate curriculum beginning on page 349 is organized by comprehensive field and shows the full detail of the related courses.

**MA-MPA research
requirements**

The MA research requirement is normally fulfilled by a research paper and a grade of **B** in the two required seminars, one in each of the two comprehensive fields.

The MPA research requirement is normally fulfilled by a research paper and a grade of **B** in the one research seminar required in one of the two comprehensive fields.

As an exceptional case, requiring special approval by the Dean, this requirement may be met by registration for six hours in 56.797: *Master's Thesis Seminar* and completion of an acceptable Master's thesis. Six credit hours, with a grade of **B** or better, in 56.630: *Government Internship* may be accepted in lieu of one three-hour research seminar.

Doctor of Philosophy Degree

General Requirements

See page 38 for the general University requirements for the Ph.D. degree. The following SGPA requirements also apply generally to all SGPA Ph.D. programs.

**Ph.D. admission
requirements**

Candidates applying for consideration for admission to the doctoral program are required to have a master's degree, or equivalent, with a better-than-B record if the undergraduate record is at least 1.5 overall on a 3.0 scale. If the undergraduate record is below 1.5, the admission standard is 2.3 in a completed master's program or 2.5 in a master's program still in progress. For applicants who are exceptional in some compensating respect, provisional admission will occasionally be granted on records which do not meet these standards.

Preference will be given to applicants for fulltime study. Admissions for part time Ph.D. study will become increasingly selective, but the highly qualified part time Ph.D. student will continue to be welcomed. All applicants, and especially those who intend part time effort, should be aware that these SGPA Ph.D. programs will be demanding undertakings. Only those who are very strongly motivated should apply.

If an applicant is marginal by these standards, or if the School has accepted as many Ph.D. students as it currently has room for, the applicant may be offered admission to the related SGPA master's program (even if he already has one master's degree), with later reconsideration for Ph.D. admission on the basis of his new performance. In such cases, except for two master's level comprehensive examinations, the total program will be approximately the same whether in MA/Ph.D. sequence or direct Ph.D. admission.

Foundation course requirements A relevant academic foundation in undergraduate and Master's programs is preferred, but not required. The minimum course and seminar requirements stated below presume such foundations. The student who comes without them will be required to take substantially more than such minimum requirements, including the possibility of special or undergraduate preparatory courses with no graduate credit. See the foundation courses listed in the preceding statement of master's degree program requirements.

Minimum course and seminar requirements These SGPA Ph.D. programs are a requirement for the fulfillment of a carefully designed program profile, not just for the accumulation of an arithmetic total of credit hours. The minimum requirement is 60 hours of graduate course and seminar work, including relevant master's level work but not including dissertation. The significant criterion, however, is the adequacy of the student's preparation for his comprehensive examinations. More likely than not, this will be a need for more than the minimum 60 hours.

As a positive requirement, the Ph.D. student will take any necessary foundation courses. All doctoral students are required to take 53.610 and 53.611: Theory and Method of Political Research-I and II, or to show direct equivalents. Each student is required to take one advanced seminar in each of his four comprehensive examination fields, although three hours of his dissertation seminar registration will fulfill this requirement for the field in which his dissertation will be written.

Except for these requirements and the 60-hour minimum, each doctoral student will be the judge of his own need for any particular course in any of his comprehensive examination fields. If he takes any such course without having had the specified prerequisites, he does so at his own academic risk.

Quality requirement An average of better-than-B in all graduate course and seminar work. This is higher than the University requirement of 2.0 for required good standing, and will normally be interpreted as a requirement of 2.25 or better.

Advancement to Candidacy The student will apply for advancement to candidacy after 18 hours. He may be terminated at this time if he has failed to maintain the quality requirement or if, for other reasons, the Dean and faculty conclude that he does not show high probability of completing the

program with high, not just minimal, performance, or that he does not fulfill the requisite standards of personal character.

The review of the student at the stage of advancement to candidacy may include a review of record or oral or written examination, as the dean and faculty of the School may determine, either as a general policy or as special action in an individual case.

Doctoral Comprehensive Examinations

The comprehensive examination fields are listed on page 348 and the related courses are given in the graduate curriculum following. These examinations will include a written examination in each of the three non-dissertation fields, all taken at the same time at the end of course work. The fourth examination, to be taken shortly after the writtens have been passed, will be an oral. It will cover primarily the substance of the dissertation field, but it will also be a more general examination of the intellectual breadth and quality of the candidate. With special prior notice to the candidate, the oral may also re-examine areas of special weakness in his written examination performances. This oral examination is entirely separate from the later oral defense of dissertation.

Tools of Research

Two tools of research, certified through proficiency examinations or by completing specific courses prescribed by the department which administers the particular tool. SGPA students must certify one tool, at least, prior to admission to comprehensive examinations. The other must be certified before final approval of dissertation proposal.

For the Ph.D. in Government, statistics is presumptively required as one of the two tools. The other tool may be a foreign language, mathematics, or educational and psychological tests and measurements.

For Ph.D. candidates in Public Administration or in Public Administration: Technology of Management, statistics and mathematics are presumptively required as *the* two tools.

In a rare case for strong reason, the Dean may approve a substitution for the presumptive tool requirements of statistics or mathematics.

Dissertation and Oral Examination

A dissertation, accomplished under registration for twelve semester hours in one of the doctoral dissertation seminars listed in the graduate curriculum. This requirement is fulfilled by the completion of an acceptable dissertation and by successful defense of the dissertation in a final oral examination. The basic dissertational standard is that of a high quality of original research in a subject which is directly relevant to the student's doctoral program emphasis.

The subject of the dissertation will normally be expected to lie within the boundaries of one of the candidate's four comprehensive examination fields. At the discretion of the candidate's dissertation committee, the oral examination may include the comprehensive field in which the dissertation is written, or the candidate's total graduate program.

Part-time doctoral students are strongly urged, if such is at all possible, to plan to spend at least one semester in fulltime residence at the stage of the development of the dissertation proposal and the initiation of the research.

Comprehensive Examination Fields

These fields are listed here by number and title only. The details and descriptions of the related courses are given in the full graduate curriculum at page 354. In this listing, certain fields are marked as specific requirements for particular degree programs. The full details of the student's patterns of requirements and choices are available from the Dean of SGPA.

Politics and Government Comprehensive examination fields in the curricular area of Politics and Government: (M=Master's, D=Ph.D.)

53.60M-D—Political Philosophy (53.60D required for Ph.D. in Government)

53.62M-D—Science, Technology, and Government (53.62D required for Ph.D. in Public Administration: Technology of Management)

53.63M-D—Comparative Government

(Previous field 53.64: Politics and Administration of Developing Nations is continued only for students for whom it has already been formally approved by advancement to candidacy at the Ph.D. level, or advisor's written commitment at the master's level. The revised course structure of 53.63 gives sufficient flexibility for a developing nations emphasis for the student who wishes it.)

53.70-53.77 (all M and D): These are a group of regional specializations in comparative government which are available only to SIS or other non-SGPA graduate students. For identification purposes, the full style of each of these titles will be: 53.7-M or D: Comparative Government: (region)

53.70—Europe-USSR

53.71—Middle East and North Africa

53.72—China-Far East

53.73—South-Southeast Asia

53.74—Latin America

53.75—Atlantic Nations

53.76—Communist Nations

53.77—Africa

53.65M-D—The American Governmental System

53.66M-D—Political Dynamics

53.67M-D—Public Law

53.68M-D—Urban Affairs (53.68M required for MPA in Urban Affairs)

53.69M-D—Government and the Social Order

Public Administration and Management Comprehensive Examination fields in the curricular area of Public Administration and Management: (M=Master's, D=Ph.D.)

54.60M-D—The Governmental Administrative Establishment (Required for Ph.D. in Public Administration)

54.61M-D—The Management of the Governmental Administrative Establishment. (54.61M is required for the MPA and the MA in Public Administration. 54.61D is required for the Ph.D. in Public Administration and in Public Administration: Technology of Management.)

54.62M —Urban Planning and Development (a special field, available only at the Master's level as an option for the MPA in Urban Affairs)

54.64M-D—Governmental Financial Policy and Program

54.65M-D—Public Personnel Administration

(54.64 and 54.65 will normally be approved only for the MPA or the MPA: Technology of Management. They are continued at the doctoral level primarily as accommodation of elections which have previously been approved. Future approval at the doctoral level is improbable, although not altogether impossible for a highly exceptional cases.)

54.67M-D—One specialized line or staff function (Available only with special approval, and only if adequate faculty capability for direction of study and research in the subject can be found within the SGPA, The American University, or the arrangements of the Consortium of Universities.)

54.68M —Correctional Administration (A special field, administered by the Institute for Correctional Administration, for students in the C.C.E. program for M.S. in Correctional Administration. Consult Mr. Howard Gill, downtown, 1903 F Street, N.W.)

Technology of Management These comprehensive examination fields are listed under the Center for Technology and Administration section of this catalog. (See page 316.)

UNDERGRADUATE COURSES

53.001 Political Science Student Orientation (0)

Required of all entering freshmen and transfer students who have less than 30 hours of credit. Charge.

FOUNDATION COURSES

These courses (15 hours) are required of all Political Science majors.

53.100 Modern Government (3)

A comprehensive introduction to the study of Political Science, with emphasis on the theory, processes, and institutions of politics and government in the modern world. The nature and functions of political systems in society. Principal ideological conflicts today. Theory and practice in countries in varying stages of economic and political development.

53.150 The U.S. Political System I (3)

The development of the governmental system of the United States. Contemporary federalism, including the changing relationships of national, state, and local governments. The major institutions of policy-making at the national level. Concepts of representation in the American political system.

53.250 The U.S. Political System II (3)

The processes of politics and public policy making, emphasizing the dynamics of public policy formation in the U.S. Federal system. Consideration is given to the major institutions of state and local government.

Prerequisites: 53.100 and 53.150.

33.200 Introduction to World Politics I (3)

An SIS Course required of all students in the undergraduate political science curriculum.

53.300 Research and Political Science I (3)

An introduction to social science research: sources, approaches, and methods, as they relate to Political Science.

Prerequisite: at least nine hours of SGPA or SIS courses and Junior standing.

Fields of Specialization

THE THEORY OF POLITICS AND GOVERNMENT

The following two courses cover: nature and basic concepts of political theory; social origins and functions of political ideas; the study of selected political theories beginning with Plato; the political theories of the modern state; an introduction to contemporary political doctrines.

53.310 Political Theory I (3)

Prerequisite: 53.100.

53.410 Political Theory II (3)

Prerequisite: 53.310.

FOREIGN AND COMPARATIVE GOVERNMENT

53.330 Comparative Government I (3)

A comparative study of the constitutional systems and governmental, legal, and political institutions and processes of Great Britain, France, West Germany, and the USSR, in the context of their historical development, social and economic structure, and cultural setting.

Prerequisites: 53.100 and 53.150.

53.430 Comparative Government II (3)

The governmental and political institutions and processes of developing countries, to include India, Communist China, and other selected areas.

Prerequisite: 53.330.

53.448 Government and Politics of Latin America (3)

This course is strictly elective, and does not apply toward Political Science major program requirements.

Prerequisite: A course in comparative government or some aspect of Latin America.

For students who want a narrower focus on the political institutions of regional groups of countries, a series of .400 level SIS courses is available to be taken under the related courses category. These courses are *not* substitutes for 53.430 in this field of specialization in Foreign and Comparative Government. Also, see the SGPA graduate curriculum for a group of .500 level country and regional courses in foreign governments.

INTERNATIONAL RELATIONS

One or two of the following pairs of SIS courses may be chosen as fields of specialization. If the student elects two of these options, no further international relations courses may be applied to the "Related Course Requirement". For Political Science majors, 53.100 should precede any of these courses.

33.400 Introduction to International Law (3)

33.440 Introduction to International Organization (3)

33.302 Foreign Policies of the Great Powers (3)

33.430 American Foreign Policy (3)

Introduction to an Area (33.414, 33.410, etc.)

International Relations of that Area (33.429, 33.425, etc.)

PUBLIC LAW AND THE LEGAL SYSTEM

53.350 U.S. Constitutional Law I (3)

Basic concepts of jurisprudence; historical development of the Anglo-American legal system; the nature of the adversary process; the American legal system, state and federal: structure, jurisdiction, and relationships; the development of American concepts of constitutional law and the Supreme Court as its expositor; development of major constitutional doctrines to the Reconstruction period.

Prerequisites: 53.150 and 53.250.

53.450 U.S. Constitutional Law II (3)

Topical and historical treatment of major constitutional doctrines since Reconstruction; interpretations of the 14th Amendment: due process and equal protection; development of the national powers of commerce and taxation, and their implications for the federal system; interpretations of the First Amendment as applied to national and state legislation; control of the administrative process; current constitutional problems and trends.

Prerequisite: 53.350.

THE POLITICAL AND ELECTORAL SYSTEM

53.351 Political Dynamics (3)

The nature and roles of public opinion, interest groups, and political parties in pluralistic societies. Emphasis on American politics. Concepts of political behavior and techniques of political action. Problems in political participation, communication, leadership, decision-making.

Prerequisite: 53.150.

53.451 Political Parties and Interest Groups (3)

The party system and group politics in the U.S. The functions, organization, techniques of political action. Elections and election behavior. Problems in practical politics.

Prerequisite: 53.351.

NATIONAL POLICY PROCESSES

53.150 and 53.250, together, will treat the total policy-making system of the U.S. governmental structure. For the student who elects this specialization, these two courses will emphasize Congress and the Presidency as two major organs of the policy-making system at the national governmental level.

53.352 The Legislative Process (3)

The United States Congress: its organization, rules, and procedures, and its relationships with other parts of the political and governmental system.

Prerequisites: 53.100; 53.150; 53.250.

53.452 The National Executive (3)

The Presidency in law and practice: its relation to Congress, the public, the party structure, and the administrative establishment, and its responsibilities in foreign and military affairs.

Prerequisites: 53.100; 53.150; 53.250.

THE ADMINISTRATIVE SYSTEM

53.353 The Administrative Process (3)

Administration in the public sector, its principles and processes. Analysis of the development of public administration as a discipline and its relationship to other disciplines. Survey of the techniques of modern public administration.

Prerequisites: 53.100; 53.150; 53.250.

53.453 The Bureaucracy (3)

The nature and functions of bureaucracies in modern government, with emphasis on the U.S. Federal executive. The relationship of bureaucracy to the political process. The administrative organization and management of the public sector.

Prerequisite: 53.353.

THE METROPOLIS

53.354 Government and the Metropolis (3)

Growth of cities and metropolitan areas. Emergence of the urban environment as a focus for public policy. Implications of metropolitan development and functions for the organization of government and politics in the United States. Impact of the metropolis on governmental programs.

Prerequisites: 53.150, 53.250.

53.454 Metropolitan Political Systems (3)

A comparative study of approximately five U.S. and foreign metropolitan areas, with attention both to their political organizations and to their responses to problems such as urban design, transportation, public safety, finance, housing, etc.

Prerequisite: 53.354.

GOVERNMENT AND THE SOCIAL ORDER

(Available only as electives for CAS students.)

53.355 Government, Economics, and the Social Order (3)

The forces which have shaped government's role in the social and economic order. Emphasis on institutional change, ideological development, and constitutional doctrines, which together determine the scope, content, and character of government's role. The relationships and implications of this role for the individual and the ideal of liberty.

Prerequisites: 53.100; 53.150; 53.250.

53.455 Problems in Economic and Social Policy (3)

The governmental instruments and processes employed in the implementation of policy: directive, persuasive, promotional, exemplary, advisory. Examination and analysis of substantive policy and program areas: labor anti-trust, transportation, health and medical care, poverty, fiscal management, and "the new economics".

Prerequisite: 53.355.

A ONE-COURSE CHOICE FOR SGPA SENIORS

(from the following)

53.400 Research and Political Science II (3)

An advanced course in the scope and method of research in the field of Political Science, with special emphasis on the techniques of social science research and on their application to specific problem areas. Intended for those who plan to continue in graduate study. The combination of 53.300 and 53.400 will be equated with the graduate course 53.610 Scope and Method of Political Science Research I.

Prerequisites: 53.300 and Senior standing.

53.401 Senior Research Seminar (3)

With variable scheduling from semester to semester, possibly with differing concurrent sections, this seminar will be: (1) an undergraduate research seminar, available for a few selected students for supervised experience in individual or team research in matters of government and politics; or (2) a seminar, for a few selected students, to provide 3 more hours of specializa-

tion in the subject of one of the preceding six hour tracks (e.g. political theory).

Prerequisites: Senior standing as a Political Science major and permission.

53.460 Perspectives in Government and Politics (3)

A synthesis for the finishing senior on the relation of the institution of government to its intellectual, social, and scientific environments. This course will vary from semester to semester, as determined by the particular student group, the instructor, and the contemporary public problems of the moment. It will make use of important visiting lecturers. It may be taken in either semester of the fourth undergraduate year, but not more than once for credit.

Prerequisites: Senior standing as a Political Science major and permission.

Honors and Tutorial Courses

56.498 Honors Tutorial Reading in Political Science (3)

56.499 Honors Seminar and Public Affairs Laboratory in Political Science (3)

56.390 Undergraduate Reading Course (3)

As arranged with a supervising faculty member.

56.490 Individual Research Project (3)

As arranged with supervising faculty member.

56.495 Tutorial Seminar for Undergraduate Foreign Students (No Credit)

The vehicle for registration for special assistance in inter-cultural and academic problems to foreign undergraduate students who have need of such assistance. The cost of registration in this seminar will be determined on a special fee basis, ranging from \$200 to \$500 per semester depending on the character and extent of the assistance required.

The Washington Semester

56.410 Washington Semester Seminar I (3)

56.411 Washington Semester Seminar II (3)

56.412 Washington Semester Research Project (3)

All nine hours required. For advanced students enrolled from cooperating institutions, through formal inter-institutional agreements of this program. The study of U.S. government in action, through seminars with senior representatives of U.S. Government agencies, reports, conferences, lectures, and guided seminar evaluations of experience. The research project is the requirement of an individual analytical report, prepared under the guidance and counseling of the academic directors of the program.

Prerequisite: Selection. All offered every semester.

Washington Semester courses, as listed above, are primarily for students who come from other institutions under the arrangements of the Washington Semester Program. A selected few Political Science majors from the American University may participate in the program each semester. For those so selected, the nine hours of this program may be substituted for any one of the six-hour sequences required under paragraph 2 above, and may be used for the achievement of Honors in Political Science in the same way as the honors courses which are also described above.

Police, Correction, and Public Safety Administration

The following courses are maintained for use in off-campus programs, as required for specially stated student program patterns:

- 54.100 Backgrounds of Police Work (3)
- 54.110 Introduction to Law Enforcement (3)
- 54.210 Police Administration I (3)
- 54.211 Corrections Administration (3)
- 54.212 Fire Administration (3)
- 54.310 Police Administration II (3)
- 54.320 Police Investigation (3)
- 54.321 Accident Investigation (3)
- 54.330 Traffic Planning, Regulation, and Control (3)
- 54.340 Criminal Law I (3)
- 54.341 Criminal Law II (3)
- 54.350 Criminalistics (3)
- 54.410 Special Problems (3)
- 54.440 Civil Rights and Civil Liberties in Law Enforcement (3)
- 54.450 Problems in Criminalistics (3)

Complete descriptions of these courses may be found under the College of Continuing Education, in particular the Law Enforcement curriculum.

ADVANCED COURSES

This course listing includes a few .500 level courses which are available to advanced undergraduate students who meet the prerequisites, and which may also be taken for credit by graduate students. Most of these courses are at the .600 or .700 level, and are open only to graduate students in non-degree or degree program status.

This presentation of this curriculum is organized as follows:

- Politics and Government
- Public Administration and Management
- The Technology of Management
- Special Courses and Internships

The first three of these are the curricular areas of the graduate degree programs. Within each of these, the courses are grouped by comprehensive examination fields.

Politics and Government

POLITICAL PHILOSOPHY (53.60M AND 53.60D)

53.600 Political Thought of the Modern State (3)

An intensive analysis of the major political philosophers from the Renaissance to the Twentieth Century. For graduate students who have not had a course in modern political theory. This, or equivalent, required in all M.A. and Ph.D. programs in Government.

Prerequisite: graduate standing.

53.601 Foundations of Western Political Thought (3)

Political thinkers, theorists, and movements from Plato through the Middle Ages. Earlier theoretical foundations of Western Civilization and its political institutions and concepts. Appropriate reference to the contributions of Oriental philosophies.

Prerequisite: graduate standing.

53.602 Contemporary Political Thought (3)

Background and major issues of Twentieth Century political thought. Contemporary theories and ideological movements. Theoretical implications and contributions of functionalism and behavioralism.

Prerequisite: 53.600, or equivalent, and graduate standing.

53.603 Marxist and Non-Marxist Socialism (3)

Origins and characteristics of socialist philosophies, ideologies, and doctrines, and their relations to derivative political movements. Their significance for contemporary understanding of the ideological orientations of the developing and the communist nations.

Prerequisite: 53.600, or equivalent, and graduate standing.

53.604 American Political Theory (3)

Major concepts and ideas of American political thought, especially those which have influenced the development of the American system of government.

Prerequisite: a course in American history, and graduate standing.

53.605 Non-Western Political Theory (3)

Political theories and politically-related philosophical concepts of non-Western cultures; their influence on their own cultures and others.

Prerequisite: 53.600, or equivalent, and graduate standing.

75.621 Modern Totalitarian Systems (3), Joint: SIS (SGPA)

Prerequisite: graduate standing.

SEMINARS IN POLITICAL PHILOSOPHY

53.700 M.A. Research Seminar (3)

Prerequisite: permission.

53.705 General Seminars (3)

Prerequisite: permission.

53.706 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

These seminars in Political Theory will frequently be scheduled, from semester to semester, with differing special topics, such as "Emphasis on Contemporary Writers," "Contemporary Ideological Issues," etc.

RELATED COURSES AND SEMINARS

53.770-5 Seminars in Public Law

(When specialized in Jurisprudence)

THEORY AND METHOD OF POLITICAL RESEARCH

This group of courses is not a comprehensive field for comprehensive examination purposes.

53.610 Theory and Method of Political Research I (3)

Review of the philosophical concepts, approaches, and methodologies of social science research, as applicable in political science. Evaluation of the respective approaches and methodologies. The problems of inter-disciplinary research. This, or equivalent, required in M.A. and Ph.D. programs in this School.

Prerequisite: Graduate standing.

53.611 Theory and Method of Political Research II (3)

Building on the philosophical perspectives covered at length in 53.610, this course focuses on salient techniques of political research. Emphasis will vary from semester to semester, with content selected from: Problems of design: surveys, archives, data banks; sampling, questionnaire construction, interviewing, coding. Problems of analysis: bivariate and multivariate measures of association; causality and causal models; theory of scales, factor

analysis; statistical inference. Problems of data processing: computer hardware and software; information storage and retrieval. Introduction to simulation and mathematical modeling. Alternative strategies of research applicable to selected political problems.

Prerequisite: 53.610. A basic course in statistics is strongly recommended. (Required of all Ph.D. students.)

53.715 General Seminar in Political Science Research (3)

Prerequisite: Permission.

RELATED COURSES FROM THE SOCIOLOGY CURRICULUM

65.512 Quantitative Methods in Sociology (3)

65.612 Social Research Methods I (3)

65.613 Social Research Methods II (3)

65.712 Seminar in Social Research (3)

SCIENCE, TECHNOLOGY AND GOVERNMENT (53.62M AND 53.62D)

53.620 Science and the State (3)

The interactions of science, scientists, and government, and their political, administrative, and social implications. Problems of public policy in scientific subjects. The roles and obligations of scientists toward and in public policy and administration. The politico-economic implications of governmental scientific research. The implications of science for the traditional state system and international order.

Prerequisite: Graduate standing.

55.513 Technology and Administration (3)

(See 55.061)

53.621 Contemporary Problems of Science Policy (3)

Current issues and special topics, variably of general scope or specialized focus.

Prerequisite: 53.620.

53.622 Cybernetics and Society (3)

The phenomenon of cybernation, in its most comprehensive totality, may be the most fundamentally significant social and philosophical problem of the next half-century. This course will consider the threats and promises in the widest array of dimensions: Automation and the labor force; the formidable implications of computer-amplification of the potentials of scientific research; Soviet concepts and achievements in the cybernation of bio-social research, social planning, and societal control; the international relations implications of such Soviet concepts; the issues for the U.S. citizen, the U.S. social scientist, and the U.S. government.

Prerequisite: Graduate standing.

53.623 Science, Technology, and International Politics (3)

The effects of science and technology on the territorial state system, including changes in instruments of international conduct such as diplomacy, international organization, and war. Study of the scientific components of foreign policy formation, including the scientific bases of foreign policy issues, patterns of international scientific cooperation, and the role of the scientist in the foreign policy process.

Prerequisite: 53.620.

SEMINARS IN SCIENCE, TECHNOLOGY, AND GOVERNMENT

53.720 M.A. Research Seminar (3)

Prerequisite: permission.

53.725 General Seminars (3)

Prerequisite: permission.

53.726 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

RELATED COURSES AND SEMINARS

65.549 The Sociology of Science (Sociology)

81.506-81.507 The History of Scientific Thought I & II

(From the Division of Natural Sciences)

55.670 The Politics and Economics of Research and Development

(See 55.067)

COMPARATIVE GOVERNMENT (53.63M AND 53.63D)

53.630 Graduate Introduction to Comparative Government and Politics (3)

A comparison of constitutional foundations, governmental institutions, and political processes in their historical, socioeconomic, and cultural context. Emphasis on the major democracies of Western Europe and the USSR.

Prerequisites: Graduate standing, and 53.650 (may be taken concurrently) or equivalent.

53.631 Comparative Political Systems (3)

A comparison of contemporary political systems, as they display different patterns of political power and influence in decision making. The interaction of society, power relations, and political change.

Prerequisite: Graduate standing, and 54.630 or equivalent.

53.632 Government and Politics of Developing Nations (3)

The sociopolitical characteristics of selected developing nations. Their similarities and differences in governmental structure and the dynamics of politics.

Prerequisites: Graduate standing, and 53.630 or equivalent.

53.633 Comparative Political Processes (3)

The cross-national study of political participation. Emphasis on stratification, leadership, socialization, and political culture. Problems of field research. This course also serves the comprehensive field of Political Dynamics (53.66).

Prerequisites: 53.630 and 53.631, for field 53.63; 53.660 and 53.661, for field 53.66 (may be taken concurrently with 53.661).

75.620 Seminar on World Communism (3) Joint: SIS (SGPA)

A survey of the development of socialist and communist movements, their background, organization, doctrine, and major strategic concepts; general communist strategy toward the advanced industrial and underdeveloped areas.

Prerequisites: Modern history, Marxist Theory, and permission of instructor.

75.631 The Dynamics of Revolution (3) Joint: SGPA (SIS)

Backgrounds and causes of revolutions, and the assessment and prediction of revolutionary threat or potential. The types and stages of revolution, and the techniques of revolutionary action. The planning, organization, and conduct of revolution as a conflict instrument. The prevention and suppression of revolution.

Prerequisite: Graduate standing.

75.658 Seminar on Regional Organizations: Western Europe (3) Joint: SIS (SGPA)

A survey of the factors responsible for the trend toward European organization and integration, and an examination of the more important institutions

of the European community: ECSA, EEC, WEU, Euratom, etc.

Prerequisites: Introduction to Economics or International Economics, Modern European History.

REGIONAL AND COUNTRY COURSES

Related to the comprehensive examination fields 53.70-77 for non-SGPA students only.

- 53.540 Government and Politics of Western Europe (3)**
- 53.541 Government and Politics of USSR-Eastern Europe (3)**
- 53.542 Government and Politics of The Middle East (3)**
- 53.543 Government and Politics of Africa (3)**
- 53.544 Government and Politics of Communist China (3)**
- 53.545 Government and Politics of Far East (excl. Communist China) (3)**
- 53.546 Government and Politics of South Asia (3)**
- 53.547 Government and Politics of Southeast Asia (3)**
- 53.648 Government and Politics of Latin America (3)**

SEMINARS

- 53.730 M.A. Research Seminar: Comparative Government (3)**
Prerequisite: permission.
- 53.735 General Seminars: Comparative Government (3)**
Prerequisite: permission.
- 53.736 Doctoral Dissertation Seminar: Comparative Government (3-12)**
Prerequisite: permission.

RELATED COURSES

- 19.561 Development Planning (3)**

THE AMERICAN GOVERNMENTAL SYSTEM (53.65)

- 53.650 Graduate Survey of American Government (3)**
This course approximates the six hours of the undergraduate courses 53.150 and 53.250. It is required of all SGPA graduate degree students who have not had an equivalent.
Prerequisite: Graduate standing.
- 53.651 The Legislative Process (3)**
The function of the legislature in the American governmental system, with emphasis on Congress and comparative consideration of the state legislature. Organization and procedures, relationships and interactions with the electorate, and the executive, judicial, administrative, and political establishments.
Prerequisites: 53.650, or equivalent, and graduate standing.
- 53.652 The National Executive (3)**
The role and organization of the executive branch in the American governmental system, with emphasis on the presidency and comparative consideration of the office of governor. The functioning of the office as chief of state, in its relationships with the legislative, political, administrative, and military establishments, and in the formation and control of foreign and defense policy.
Prerequisites: 53.650, or equivalent, and graduate standing.
- 53.653 American Federalism (3)**
The constitutional and functional relations of American federalism. The interrelationships of national, state, and local governments. The concept of federalism in the governmental-economic and other dimensions of American

life. The comparative consideration of the role and performance of the states in the American federal system.

Prerequisites: 53.650, or equivalent, and graduate standing.

53.654 The Formation of Public Policy (3)

An integrative study of the policy-making process. The relationship of persons, groups, and governmental and non-governmental institutions in the initiation, formulation, and implementation of public policy in the United States. The organization and manipulation of opinion. Theories of policy formation and decision-making. This course also serves the comprehensive field in Political Dynamics (53.66).

Prerequisites: 53.651 and 53.652 or 53.661 and 53.662.

53.671 The Judicial System and Process (3)

(See field 53.067)

75.672 Foreign Policy Formation in the U.S. (3) Joint: SIS (SGPA)

The conduct and control of foreign policy—with special emphasis on administrative and policy problems of the United States and selected foreign countries; impact of foreign policy in the domestic and international field; State Department organization and its relation to other departments, Congress, the President, and public opinion. Members may select key problems showing the making and control in relation to strategic, military, fiscal, and economic practice.

Prerequisite: a course in American Government.

75.652 Seminar on National Security Policy (3-6) Joint: SIS (SGPA)

A broad examination of the principal elements of national security policy. The world setting. Roles of Executive Branch and Congress in policy making, implementation, and control. Civilian-military equation, military doctrine, strategic intelligence. Principal elements of military strategy. Operative economic factors and forces.

SEMINARS IN AMERICAN GOVERNMENTAL SYSTEM

53.750 M.A. Research Seminar (3)

Prerequisite: permission.

53.755 General Seminars (3)

Prerequisite: permission.

53.756 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

POLITICAL DYNAMICS (53.66M AND 53.66D)

Because this is the area in which the behavioral sciences approach has especially been applied, the courses related to this subject are oriented from the theoretical and functional point of view, with heavy emphasis on the application of the theory and functional perspective to the American political context.

53.660 Political Dynamics (3)

An introduction to the nature and roles of public opinion, interest groups, and political parties in the United States. Concepts of political behavior. Functions, organizations and techniques of political action. Problems in political participation, communication, leadership, and decision-making.

Prerequisite: 53.650 or equivalent, and graduate standing.

53.661 Political Behavior (3)

Theories of the American political process. The effects of the social and economic environment on public opinion formation, political leadership, interest group conflict, and party structure. Models of power and decision-making in major institutions of American political life. Problems of concept formation, quantitative evidence, and field research in the examina-

tion of American political behavior.
Prerequisites: 53.650 and 53.610 or 53.660.

- 53.633 Comparative Political Processes (3)**
See field 53.63: Comparative Government.

- 53.663 Political Functions (3)**
Varying special sub-subjects: Political participation and socialization; political communication; representation and accountability; political leadership; decision making and policy formation.
Prerequisites: 53.660, 53.610 and 53.661 strongly recommended.

- 53.654 The Formation of Public Policy (3)**
See field 53.65: American Governmental System.

SEMINARS IN POLITICAL DYNAMICS

- 53.760 M.A. Research Seminar (3)**
Prerequisite: permission.
- 53.765 General Seminars (3)**
Prerequisite: permission.
- 53.766 Doctoral Dissertation Seminar (3-12)**
Prerequisite: permission.

PUBLIC LAW AND THE LEGAL SYSTEM (53.67)

- 53.670 Constitutional Law and the Supreme Court (3)**
Judicial power and the judicial system. The Supreme Court as an institution. Constitutional doctrine and its implications for the political and legal system, with emphasis on federalism, powers and limitations on government, and the advancement of group and individual interests and rights. Contemporary role of the Supreme Court, its characteristics and problems.
Prerequisites: 53.650, or equivalent, and graduate standing.
- 53.671 The Judicial System and Process (3)**
The nature of the judicial process and judicial decision-making. Organization, jurisdiction, administration, and comparison of federal and state court systems. Civil and criminal procedures. Functions and relationships of police, prosecutor, courts, and post-trial procedures in the administration of criminal justice.
Prerequisites: 53.650, or equivalent, and graduate standing.
- 53.672 Administrative Law and Process (3)**
Legal foundations of the administrative process. Administrative discretion. Types of administrative action and enforcement. Rule making. Administrative adjudication. Organizational, procedural, and judicial controls on administrative discretion. Scope and nature of judicial review of administrative action. Consideration of both national and state practice.
Prerequisites: 53.650, or equivalent, and graduate standing.

SEMINARS IN PUBLIC LAW AND THE LEGAL SYSTEM

- 53.770 M.A. Research Seminar (3)**
Prerequisite: permission.
- 53.775 General Seminars (3)**
Prerequisite: permission.
- 53.776 Doctoral Dissertation Seminar (3-12)**
Prerequisite: permission.

As announced in semester schedules, these seminars may be offered variably as continuations in the general scope of this field, or as specializations in some aspect such as Legislative Drafting and Statutory Con-

struction, Jurisprudence, the Law of Local Government, or some Contemporary Constitutional Problem.

URBAN AFFAIRS (53.68M AND 53.68D)

53.680 The Urban Polity (3)

The theory of local government. Comparative urban political systems. The relation of the total political system to the physical, social, economic, and administrative organization of cities, metropolitan areas, regions, and the megalopolis. Will require thorough familiarization with the literature of urban politics, urban administration, and urban development.

Prerequisites: 53.650, or equivalent, and graduate standing. Not open to students who have had 53.454 or equivalent.

53.681 Metropolitan Analysis (3)

An interdisciplinary course in the application of the approaches and methodologies of social science in the planning and analysis of urban affairs. Advanced reading in all disciplines. Creation of an interdisciplinary research design. The course is a search for the theory of the metropolis.

Prerequisites: 53.610 and 53.680.

53.682 Urban Politics (3)

Selected special emphases in various aspects of the politics of urban and metropolitan pluralism: Community and inter-community power systems; politics of core and suburb; politics of urban functions; political decision making, organization, participation, communication, leadership in the urban environment. Individual and team research.

Prerequisites: 53.680, or equivalent, and graduate standing.

53.683 Urban Administration (3)

Selected special emphases in the general and specialized functions of administrators in local, regional, state, and national public agencies dealing with urban affairs. The political, intergovernmental, fiscal, and developmental aspects of urban administration. Field research and case studies.

Prerequisites: 53.680, or 54.611, or equivalent, and graduate standing.

53.684 Urban Planning (3)

Selective special emphases in the politics and technical problems of urban planning: Comprehensive land planning, social and economic planning, transportation, renewal, rehabilitation and housing, open spaces, recreation, civic design, capital budgeting, zoning and other means of regulation and execution of plans. Special emphasis on political and intergovernmental context of planning and development functions and decisions. Field research. Case studies. *Prerequisites:* 53.680, or equivalent, and graduate standing.

56.531 Urban Affairs Laboratory (6)

See Special Courses and Internships.

56.630 Graduate Internships in National, State, and Local Government, or in a Research Organization (6)

See Special Courses and Internships.

SEMINARS IN URBAN AFFAIRS

53.780 M.A. Research Seminars (3)

Prerequisite: permission.

53.785 General Seminars (3)

Prerequisite: permission.

53.786 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

RELATED COURSES AND SEMINARS

- 3.534 **Cultural Analysis (3)**
- 11.585 **Land Planning and Use (3)**
- 11.778 **Seminar in Land Planning and Use (3)**
- 65.510 **Concepts of Sociology (3)**
- 65.511 **Theory of Social Research (3)**
- 65.542 **Sociology of Political Action (3)**
- 65.547 **Social Stratification (3)**
- 65.567 **Urban Redevelopment (3)**
- 65.561 **Public Welfare (3)**
- 65.563 **Causes of Crime (3)**

GOVERNMENT AND THE SOCIAL ORDER (53.69M AND 53.69D)

Governments have at all times shaped and directed social and economic conditions in their societies, imposing politically-determined value choices on them. Contemporary governments, however, including the American Government, have found themselves inexorably drawn more and more to become the planners, promoters, mediators, regulators, and performers of socio-economic functions.

The content of this field is the relationship of the governmental system to the major social and economic problems of contemporary society, with primary, but not exclusive, emphasis on the United States. Courses in the field will examine the causes which lead governments to intervene in social and economic organization, the techniques and instruments employed, the factors influencing the choice of instruments and policies, the trends of policy which may be discerned or predicted, and the consequences of present and future policies for the individual and for society.

The courses in this field will intersect with the curricula of sociology, economics, and business administration, but they are not duplications. They do not emphasize the theory and substance of those other areas of knowledge in which policy choices must be made. Rather, they are concerned with the political policy choices required in the use of knowledge from these fields.

These courses will be open both to the student who is preparing for comprehensive examination in the field and to the student who has a special interest in a single course. Either student must have at least the equivalent of the stated prerequisites: 53.630: Graduate Introduction to Comparative Government and Politics for those taking 53.691, and 53.650: Graduate Survey of American Government for all other courses in the field. Some previous or concurrent work in sociology or economics will be beneficial, but is not required.

53.694 **Government and the American Society (3)**

The political, economic, and cultural setting of American society as the source of the major problems of governmental policy and action. The ideological and constitutional foundations and concepts of the governmental role in social and economic policy. Contemporary policy and practice in planning, regulation, promotion, and redistribution. Problems and consequences with respect to the distribution and relationships of social, economic, and political power, status, and benefit.

Prerequisites: Graduate standing and 53.650, or equivalent.

53.691 **Ideology, Culture, and Public Policy (3)**

A comparative study of the patterns of government economic and social policy in various countries and of the factors affecting policy choices. The effects of political and social structure, historical experience, attitude, ideas,

and ideologies upon the policies with which governments attempt to deal with economic and social problems. Close examination of examples chosen from selected industrialized and less-developed countries.

Prerequisites: Graduate standing, and 53.630 or equivalent.

53.692 Government and the American Future (3)

The definition of the long-range goals of the future American society. The attributes of the policy and action required to fulfill them. The governmental process of societal planning. The computation of social, economic, and political costs. The engineering of the achievement of social and political change.

Prerequisites: Graduate standing, and 53.650 or equivalent.

53.620 Science and the State (3)

See description under comprehensive field 53.62.

53.693 Contemporary Problems of Social Policy (3)

Each offering of this course will focus on a special problem area of current importance—race relations, poverty, air pollution, education, etc. For the selected topic, the course will attempt to define the issues, to analyze the social, legal, political, and administrative factors which affect it, and to design and compare the possibilities and patterns of governmental resolution.

Prerequisites: Graduate standing, and 53.650 or equivalent.

SEMINARS IN GOVERNMENT AND THE SOCIAL ORDER

53.790 M.A. Research Seminar (3)

Prerequisite: permission.

53.795 General Seminars (3)

Prerequisite: permission.

53.796 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

RELATED COURSES AND SEMINARS

65.542 Sociology of Political Action (3)
(Sociology)

19.558 Comparative Economic Systems (3)
(Economics)

19.561 Development Planning (3)
(Economics)

19.761 Theory of Economic Development (3)
(Economics)

10.500 Business-Government Relations (3)
(SBA)

10.705 Seminar in Business-Government Relations (3)
(SBA)

Public Administration and Management

THE GOVERNMENTAL ADMINISTRATIVE ESTABLISHMENT (54.60M AND 54.60D)

This field emphasizes the character and functions of the administrative institutions of government—the bureaucracy as an institution, the sociology of the large administrative organization, and the relationships of the administrative establishment, as a whole, with the other institutions and functions of government. The theory and practice of the internal management of the departmental level of governmental agency is the subject of field 54.61.

54.600 The Administrative State (3)

The nature and significance of the administrative state as a major characteristic of modern government. The governmental administrative establishment—the bureaucracy—as a political, social and governmental institution, including sociological and psychological as well as political science perspectives. The interactions of the bureaucracy with social purpose and with other governmental functions and institutions. The theory and problems of administrative organization at the governmental level.

Prerequisite: 53.650, or equivalent, and graduate standing.

53.652 The National Executive (3)

(See field 53.65)

54.601 The History of Administrative Institutions (3)

An appreciation of the administrative systems of the ancient and pre-modern world. Comparative consideration of the origins and character of civil, military, church, and non-governmental institutions, and the history and development of the American administrative style. Introduction to the pioneers of modern management.

Prerequisite: graduate standing.

54.602 Comparative Public Administration (3)

The managerial-administrative establishments of the major nations, as they compare with each other in conceptual foundations, structural characteristics, and functional performance. Particular emphasis on contemporary characteristics, and developments.

Prerequisite: 54.611 or 53.630.

54.603 Administration in International Organizations (3)

The history and present character of administration in the international agency context. The varieties of international administrative agencies and their special requirements of organization, secretariat structure and operation, and adaptation of general management practices. The special problems of communication, leadership, and interpersonal relations in the culturally mixed staff. Administrative-political relations in the international agency. Special emphasis on the League of Nations, historically, and the United Nations complex.

Prerequisite: 54.611 or 33.640.

53.683 Urban Administration (3)

(See field 53.68)

SEMINARS IN THE GOVERNMENTAL ADMINISTRATIVE ESTABLISHMENT

54.700 M.A. Research Seminar (3)

Prerequisite: permission.

54.705 General Seminars (3)

Prerequisite: permission.

54.706 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

RELATED COURSES AND SEMINARS

53.671 The Judicial System and Process (3)

(See field 53.67)

53.672 Administrative Law (3)

(See field 53.67)

THE MANAGEMENT OF THE GOVERNMENTAL ADMINISTRATIVE ESTABLISHMENT (54.61M AND 54.61D)

This field concerns the large governmental department as the unit of management, the theory and practice of accomplishing its management, and the

criteria and methods of analysis of such an agency to increase the effectiveness of its operations and its management.

54.610 Modern Public Management I (3)

The development of management as a social function. The streams of past social, economic, political, and scientific thought which have merged in the theory and practice of modern management. The scientific management movement. The public administration movement. The modern management movement in business and government. Introduction to the basic principles of the organization, administrative direction, and operation of the complex managerial establishment in government.

Prerequisite: Graduate standing.

54.611 Modern Public Management II (3)

The perspectives, problems, and processes of the executive function of directing the managerial-administrative organization, including the major characteristics and roles of the spectrum of management sub-functions which it must depend on and integrate. Emphasis on the governmental context, but with appreciation of the similarities and contrasts with non-governmental management. The main lines of the behavioral and organizational theory of the managerial organization and the management function. (The different competence of diagnostic analysis and creative engineering of administrative structure and process is the burden of 54.613).

Prerequisite: 54.610.

54.612 The Behavioral Sciences in Public Management (3)

Psychological and social concepts and theories of the characteristics, attitudes, behaviors, and relationships of individuals and groups, with special application to administrative organization and relationships. The meaning and application of such concepts and theories in the manager's understanding of the behavior of his organization, in his interactions with subordinate executives and employees, and in his external executive, legislative, political, and public relations.

Prerequisite: 54.610.

54.613 The Analysis of Governmental Organization and Operation (3)

The evaluation and diagnosis of governmental administrative organization, performance, and productivity. The design and installation of organizational and operational systems and procedures.

Prerequisite: 54.610.

54.614 The Staff Function in Government (3)

The function of senior governmental staff service. Military and civilian perspectives and concepts. The special problems of the staff executive. The mechanisms and systems of staff coordination and control. The directive instruments of administration.

Prerequisite: 54.611

53.672 Administrative Law (3)

(See field 53.67)

55.660 Management Information and Reporting Systems (3)

(See field 55.66).

SPECIALIZED COURSES

(not included in the comprehensive field pattern)

54.510 The Management of Institutional Records Systems (3)

The kinds and functions of institution paper and paperwork, with primary emphasis on the development and installation of a records management program. Physical facilities; systems and equipment for the storage of record and information paper; reproduction processes and equipment; mail; correspondence; telecommunications. (For comprehensive systems of automated

information storage and processing, see courses under field 55.66).

Prerequisite: administrative experience, or undergraduate course work in government, public administration, or business administration.

54.511 Applied Administrative Management (3-9)

A special purpose course arranged for specially organized groups of foreign participants.

SEMINARS IN GOVERNMENTAL MANAGEMENT

54.710 MA-MPA Research Seminar (3)

Prerequisite: permission.

54.715 General Seminars (3)

Prerequisite: permission.

54.716 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

RELATED COURSES AND SEMINARS

55.511 The Systems Approach (3)

(See Center for Technology and Administration.)

55.512 Introduction to Cybernetics (3)

(See CTA)

55.513 Technology and Administration (3)

(See CTA)

55.540 Operations Research in Management (3)

(See CTA)

GOVERNMENTAL FINANCIAL POLICY AND PROGRAM (54.64M AND 54.64D)

The School of Government and Business Administration of The George Washington University regularly offers the following courses in this same field:

PA 248 Financing Municipal Services (3)

PA 251 Governmental Budgeting (3)

PA 252 Problems in Planning, Programming, and Budgeting (3)

PA 254 Seminar: Financial Management in the Federal Service (3)

In keeping with the purpose of the Consortium of Universities, SGPA will increasingly use these GWU courses as substitutes for its own courses in satisfaction of the requirements of this comprehensive field. For this field, the courses listed in the semester schedules of classes will be a correlated combination from the above GW courses and the following SGPA courses.

54.640 Federal Fiscal Policy (3)

The fiscal significance and effect of the Federal budget. A consideration of the subjects of national income level, tax structure, and the large expenditure areas (e.g., national defense, foreign aid, agricultural support, veterans' benefits, the public debt) as they bear on the decisions and actions of Federal budget administrators.

Prerequisite: graduate standing and at least introductory economics.

54.641 Federal Financial Management and Comptrollership (3)

The financial functions of federal administration, including the roles and relationships of the central agencies, and the budget, accounting, and other financial functions of the financial administration of the individual department or agency. For the general manager who needs to know the contributions of financial management to his broader management responsibilities, and for the specializing executive or staff member who will be responsible for the financial function. This is not an accounting course.

Prerequisite: a course in public administration or experience in budgeting or

financial administration, 53.650, and graduate standing.

54.642 Financial Administration in State and Local Government-(3)

The fiscal significance and effect of state and local, governmental financial administration. The fiscal functions of budget, treasury management, accounting, and auditing, considered in the perspective of the administrator in state and local levels of American government.

Prerequisite: 54.610, 53.683, or one of the preceding courses in this field, plus 53.650 and graduate standing.

54.643 Governmental Program and Budget (3)

The processes and instruments of the planning, programming, and budgetary functions of the modern public managerial establishment, with special emphasis on the current approaches of the Federal Government in this function. A course to produce top managers and senior staff specialists who can design, use and integrate these functional systems for maximum managerial effectiveness in the making of decisions and the control of performance.

Prerequisite: a course in public administration or experience in budgeting, 53.650, and graduate standing.

54.644 Federal Budgetary Procedure (3)

The budgetary practice of the Federal Government, from the operating viewpoint. The budget cycle. Preparation and justification of estimates. Budget execution. Comparison of agency practices and techniques in budgeting.

Prerequisite: a course in public administration or experience in budgeting, 53.650 and graduate standing.

SEMINARS IN GOVERNMENTAL FINANCIAL POLICY AND PROGRAM

54.740 MA-MPA Research Seminar (3)

Prerequisite: permission.

54.745 General Seminars (3)

Prerequisite: permission.

54.746 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

RELATED COURSES AND SEMINARS

10.656 Planning—Programming—Budgeting (3)
(SBA)

19.541 Fiscal Theory and Planning (3)
(Economics)

PUBLIC PERSONNEL ADMINISTRATION (53.65M AND 53.65D)

The School of Government and Business Administration of The George Washington University regularly offers the following courses in this same field:

PA 231 Public Personnel Administration (3)

PA 232 Problems in Public Personnel Management (3)

PA 233 Seminar: Manpower Development and Utilization (3)

PA 235 Technological Change and Manpower (3)

In keeping with the purpose of the Consortium of Universities, SGPA will increasingly use these GWU courses as substitutes for its own courses in satisfaction of the requirements of this comprehensive field. For this field, the courses listed in the semester schedules of classes will be a correlated combination from the above GWU courses and the following SGPA courses.

54.650 Principles of Public Personnel Administration (3)

Personnel Administration as an integral aspect and function of management. Its relationships with other managerial and administrative functions and

processes. The characteristics and procedures of the major personnel sub-functions: recruitment, selection, classification, evaluation, training, etc. The Federal civil service system will be the primary frame of reference, but with some generalizing and comparative extension to other variants of U.S. personnel administration system.

54.651 Manpower Utilization and Public Personnel Requirements Planning (3)

The problems of national and governmental manpower supply and demand. The comparative study of military and non-military policies and practices in the planning of the personnel requirements of the administrative agency. Comparison of governmental and non-governmental practice. The problems of creating supply to fulfill difficult demand: job-redesign; training and re-training; centralization and services; incentives; etc.

54.652 Psychological Instruments and Methods in Public Personnel Administration (3)

As applicable in: Applicant appraisal, employee selection, placement, and evaluation; testing, rating, interviewing, and investigation; analysis of group relational and behavioral problems of efficiency, fatigue, accident experience, motivation, morale, etc.

54.653 Executive Selection and Appraisal in Government (3)

An intensive analysis of the problem of executive, as contrasted with other, personal selection and appraisal, with comprehensive consideration of the insufficiencies of current methods, of the requirements of the problem, and of the possibilities and methods for achieving significant improvement.

54.654 The Labor Relations of Public Employment (3)

Review of the rapidly changing patterns of relationships among public employers, employees, and organizations of public employees, and of their implications; the critical evaluation and design of policies, administrative concepts, and procedures for keeping pace with the dynamics of this field.

SEMINARS IN PUBLIC PERSONNEL ADMINISTRATION

54.750 MA-MPA Research Seminar (3)

Prerequisite: permission.

54.755 General Seminars (3)

Prerequisite: permission.

54.756 Doctoral Dissertation Seminar (3-12)

Prerequisite: permission.

COURSES RELATED TO ARCHIVAL ADMINISTRATION

Courses in this subject have been transferred to the Department of History. SGPA students may elect this subject as a comprehensive examination field, under the History Department field number, with the special approval of the Dean of SGPA.

ONE SPECIALIZED STAFF OR LINE FUNCTION (54.67M AND 54.67D)

Consult the SGPA Associate Dean for Graduate Programs for consideration of possibilities and requirements.

CORRECTIONAL ADMINISTRATION (54.68M)

A special field limited to CCE students for the M.S. in Correctional Administration. Consult the Director of the Institute for Correctional Administration.

SPECIAL COURSES AND INTERNSHIPS

Inter-College Programs

UNDERGRADUATE

56.410 56.411 56.412 The Washington Semester

See page 353, The Washington Semester, in the Undergraduate Political Science Program.

ADVANCED

56.610 The Washington Graduate Year: Cooperative Graduate Study Supervision

(Credit as determined by arrangements with formally cooperating institutions).

This is the offer of this School, to other colleges and universities throughout the United States who wish to enter mutually satisfactory arrangements for the purpose, to stand *in loco academic parentis* in the provision of academic counseling and guidance in course work for their graduate students who may need to carry on graduate study or dissertational research in Washington, D.C. This possibility must be limited to those students whose interests lie within one of the major curricular areas of this School, as described in the preceding pages of this catalog. We particularly invite the development of this possibility in the field of THE TECHNOLOGY OF MANAGEMENT in its public administration applications.

Comparative Government Workshops Abroad

ADVANCED

56.520 Summer Traveling Seminar (3-6)

Approximately 45-60 days.

56.521 In-Year Traveling Seminar (3-6)

One semester.

Field study of the governments of Europe or other areas of the World as announced, under the direction of a senior member of the faculty of this School. (Send for brochure).

Field Study Programs in American Government

ADVANCED

56.530 Washington Semester Summer Seminar (6)

A concentrated version of the special features of the Washington Semester program which The American University offers for cooperating schools during the regular academic year. Supervised field study of the U.S. Government, through seminars and conferences with public officials, with interpretation and synthesis in seminars conducted by the directing School faculty member. Will require student time of five full days per week for one five-week summer session. While post-graduate students are eligible, this course will not normally apply toward SGPA graduate degree program requirements.

Prerequisite: Permission, after advisory consultation or correspondence. The student should have the background of at least one undergraduate course in American Government.

56.531 Urban Affairs Laboratory (6)

Intensive field study of urban affairs and the Federal-urban relation in the Washington, D.C. setting. The laboratory will focus on selected special topics which vary from term to term, with seminar meetings and conferences with representatives of governmental and private agencies concerned with the topic selected. Students will be assigned extensive readings and special problems for personal investigation. The whole will be tied together with interpretive sessions with the supervising faculty member.

Prerequisite: Permission.

56.691 In-Service Training Projects (3)

An opportunity, for a limited number of qualified persons, to receive credit for job-related study and research, under the joint supervision of the faculty of this School and officers of the agency of employment. Such agencies may be either governmental or private.

Prerequisite: Permission.

ADMINISTRATION

<i>Dean</i>	EARL H. DE LONG, PH.D.
<i>Associate Dean</i>	CHARLES H. GOODMAN, PH.D.
<i>Associate Dean for Graduate Programs</i>	ROBERT E. CLEARY, PH.D.
<i>Assistant Dean for Washington Semester</i>	NATHANIEL S. PRESTON, PH.D.
<i>Assistant to the Dean</i>	BARBARA KING
<i>Secretaries</i>	MARY BETSCHLER LYNDA DAVIES HELEN GOULD BARBARA MATHES TONI MILLER BETH BROOKS ROBERTA PHILLIPS

FACULTY

Professors RICHARD M. BRAY (1954), B.A., M.A., Colorado

FREDERICK S. BURIN, II (1961), B.S., College of the City of New York; M.A., Syracuse; Ph.D., Columbia

GEORGE P. BUSH (1948), M.B.A., Harvard; M.A., Ph.D., American (Emeritus Professor)

HAROLD E. DAVIS (1947), B.A., Hiram; M.A., Chicago; Ph.D., Western Reserve (University Professor) (Joint: SIS-SGPA)

EARL H. DE LONG (1963), B.S., M.A., Ph.D., Northwestern

CHESTER B. EARLE (1955), B.A., Ph.D., Texas

WILLIAM Y. ELLIOTT (1963), B.A., M.A., Vanderbilt; D.Phil., Oxford (University Professor) (Joint: SIS-SGPA)

CHARLES H. GOODMAN (1956), B.S., Wilson Teachers College; M.S., Ph.D., Pennsylvania State

ROBERT E. GOOSTREE (1953), B.A., Southwestern at Memphis; M.A., Ph.D., State University of Iowa; LL.B., American (Joint: WCL-SGPA)

ROYCE HANSON (1957), B.A., Central State College (Oklahoma); M.A., Ph.D., American

LOWELL H. HATTERY (1948), B.A., Ohio; Ph.D., American

LOUIS S. LOEB (1958), B.A., Earlham; M.A., Ph.D., American

EMMET V. MITTLEBEELER (1954), B.A., LL.B., Louisville; M.A., Ph.D., Chicago

ERNST POSNER (1939), Ph.D., Berlin (Emeritus Professor) (Joint: History-SGPA)

RICHARD POWERS (1967), B.S., M.A., Ph.D., Virginia (Joint: SBA-SGPA)

NATHANIEL S. PRESTON (1961), A.B., Boston; M.A., Pennsylvania; Ph.D., Princeton

LAWRENCE ROGIN (1966), B.A., M.A., Columbia

EDGAR S. ROBINSON (1953), B.A., Amherst; M.A., Ph.D., Columbia

HAROLD H. ROTH (1946), B.A., College of the City of New York; M.A., Columbia; M.A., Ph.D., LL.B., American

LOIS E. TORRENCE (1953), B.A., Kansas Wesleyan; M.A., Southern Methodist; Ph.D., American.

THEODORE J. WANG (1968), Ph.D., University of Illinois (Joint: CTA-SGPA)

ISAAC D. WELT (1964), B.S., M.S., McGill; Ph.D., Yale (Joint CTA-SGPA)

Associate Professors ROBERT E. CLEARY (1965), B.A., M.A., Montclair State College; M.A., Ph.D., Rutgers

A. LEE FRITSCHLER (1964), B.A., Union; M.P.A., Ph.D., Syracuse

MARTIN MEADOWS (1961), B.A., M.A., Oregon; Ph.D., Maryland

ALAN D. MORRIS (1961), B.E., Dr.Eng., Johns Hopkins (Joint CTA-SGPA)

MORLEY SEGAL (1967), A.B., M.A., San Francisco State; Ph.D., Claremont Graduate School

RICHARD G. SMOLKA (1962), B.A., M.A., Ph.D., American

C. DALE STORY (1966), B.A., M.A., Ph.D., Oklahoma

Assistant Professors CORALIE BRYANT (1967), A.B., Barnard; Ph.D., London School of Economics

DENNIS D. DORIN (1967), B.A., Arizona State; M.A., Virginia; Ph.D. in progress, Virginia

JEFF FISHEL (1966), A.B., M.A., San Diego State; Ph.D. in progress, UCLA

JEROME J. HANUS (1966), B.A., Seattle; M.A., Washington; Ph.D., Maryland

B. DOUGLAS HARMAN (1967), B.A., Nebraska Wesleyan; M.A., American

JAMES L. KIRKMAN (1968), B.A., American; Ph.D. in progress, George Washington

RUTH A. LANE (1967), B.S., Simmons; Ph.D., Georgetown

HOWARD E. MCCURDY (1968), B.A., M.A., University of Washington, Ph.D. in progress, Cornell

BRUCE F. NORTON (1966), A.B., State University of New York; M.A., George Washington; Ph.D. in progress, Syracuse

JAMES K. ROCKS (1967), B.A., Columbia; M.A., Boston U. (Joint: CTA-SGPA)

MARVIN I. ROSENBERG (1964), B.S., U.S. Naval Academy; B.S., U.S.N. Postgraduate School; M.S., Purdue (Joint: CTA-SGPA)

BERNARD H. ROSS (1967), B.S., Pennsylvania; M.A., NYU; Ph.D. in progress, NYU

DIANE S. ROTHBERG (1966), B.A., Hunter; M.P.A., New York; Ph.D., Radcliffe

HERMAN J. RUETHER (1966), B.S., M.A., Xavier; Ph.D., Claremont (Joint: SIS-SGPA)

CHARLES L. RUTTENBERG (1967), B.S., Massachusetts Institute of Technology; Ph.D. in progress, NYU

Instructor MARY SUZANNE CAVANAGH (1968), A.B., Ohio U.; M.A., Georgetown; Ph.D. in progress, Georgetown

Teaching Assistants JEROME BECKER, B.A., University of Richmond; M.A., Penn. State Univ.

WAYNE B. COOK (1965), A.B., M.A., Pittsburgh

PETER DE GROOTE, A.B., West Virginia Wesleyan College; M.A., Syracuse

R. K. HEB SUR, M.A., Univ. of Bombay

DAVID LAWRENCE, B.A., Wheaton; M.A., American Univ.

WILLIAM OLIVER, B.S., Kent State Univ.; M.A., Kent State Univ.

HAROLD RELYEA, A.B., Drew Univ.; M.A., American Univ.

JOHN SHELTON, B.J., Univ. of Missouri; M.A., American Univ.

PAUL SHIRK, B.A., Oklahoma A & M College; M.A., Georgetown Univ.

Part-Time

Adjunct Professors IRWIN ALTMAN, B.A., NYU; M.A., Ph.D., Maryland

MAURICE APSTEIN, Associate Technical Director, Harry Diamond Laboratories, U.S. Army Materiel Command; B.S. (EE), College of the City of New York; M.E.A., George Washington; Ph.D., American

FRANCIS P. BRASSOR, Consultant; LL.B., LL.M., BC.S., Columbus

FRED R. BROWN, Professor of Management, Industrial College of the Armed Forces; A.B., M.S., Ph.D., Pennsylvania

PAUL M. CAMP, Deputy Chief, Office of Personnel, U.S. Public Health Service, Department of Health, Education, and Welfare; B.Sc., M.Sc., Brown

JOHN M. CLARKE, B.S., M.A., Ph.D., American

HYMEN E. COHEN, Program Analysis Officer, Civil Aeronautics Board; Ph.B., Ph.D., Chicago

RICHARD F. COOK, Director, Applied Administrative Management Program; A.B., National University of Economics and Finance (now a part of George Washington); B.C.S., Benjamin Franklin

JOSEPH D. COOPER, Consultant and Author; B.A., George Washington; M.A., Ph.D., American

ROBERT W. COX, Director of Administration, National Foundation on the Arts and the Humanities; B.A., M.S., Syracuse

HOWARD B. GILL, Director, Institute of Correctional Administration; A.B., M.B.A., Harvard

JAMES F. GRADY, Consultant and Institute Director in Management Development, CTA; A.B., Boston College (Joint SBA-SGPA)

W. BROOKE GRAVES, Specialist in American Government and Public Administration, Legislative Reference Service, Library of Congress; B.A., Cornell; M.A. Ph.D., Pennsylvania

CHARLES M. HERSH, Educational Research Department of the Army; B.A., M.A., Ph.D., Syracuse

NORMAN HOPMAYER, M.A., B.S., Northwestern Univ.; MBA., Ph.D., NYU

PAUL W. HOWERTON, Management Consultant; Ph.B., Northwestern (Joint: CTA-SGPA)

KERIM K. KEY, Supervisory Economist, Bureau of International Commerce; B.S., Robert (Turkey); M.A., California; Ph.D., American (Joint: History-SIS-SGPA)

RUPERT C. KOENINGER, A.B., Texas Tech. College; M.S., Univ. Chicago; Ph.D., Ohio State Univ.

MARTIN KRIESBERG, International Agricultural Development Service, U.S. Department of Agriculture; B.S., Northwestern; Ph.D., Harvard

DAVID D. LEVINE, Program and Policy Planning Officer, Office of Finance and Administration, General Services Administration; B.A., M.A. Wisconsin; Ph.D., American

WILLIAM A. LYBRAND, A.B., Muhlenberg College; M.S., Ph.D., Maryland

JOHN L. MCGRUDER, Director, Office of Emergency Transportation, U.S. Department of Commerce; M.A., Chicago

MARTIN A. MENDELSON, Research Psychologist, National Institutes of Health; B.S.S., College of the City of New York; M.A., Ph.D., New York

ANDREW R. MOLNAR, Special Operations Research Office; B.A., M.A., Ph.D., Maryland

ELI E. NOBLEMAN, Professional Staff Member, U.S. Senate Committee on Government Operations; B.A., LL.B., LL.M., J.S.D., New York

S. J. POMRENZE, Chief, Systems Branch, Office Management Division, Administrative Services Directorate, The Adjutant General's Office, U.S. Department of the Army; B.S., Illinois; M.A., Chicago

ALDO L. RAFFA, Consultant; Adj. Arts, Harvard; Ph.D., Palermo

RALPH SANDERS, Associate Professor of Political Science, Industrial College of the Armed Forces; B.S.F.S., M.S.F.S., Ph.D., Georgetown

MANES SPECTER, Member, Administrator's Advisory Council, Veterans' Administration; A.B., A.M., Ph.D., Harvard

O. GLENN STAHL, Director, Bureau of Policies and Standards, U.S. Civil Service Commission; B.A., Evansville; M.A., Wisconsin; Ph.D., New York

WARD STEWART, Director of Higher Education Field Services, U.S. Office of Education, Department of Health, Education and Welfare; B.A., Carleton; M.A., Chicago; Ph. D., Harvard; J.D., George Washington

CARL W. TILLER, Chief of Budget Methods, Office of Budget Review, Bureau

of the Budget, Executive Office of the President; B.A., Concordia; M.A., Minnesota; LL.D., Concordia

BARNARD T. WELSH, B.A., Duke; LL.B., Maryland; LL.M., George Washington (Joint: WCL-SGPA)

ERIC WILLENZ, Senior Research Analyst, U.S. Department of State; B.A., New School for Social Research; M.A., New School Graduate Faculty; Ph.D., Georgetown

Professorial Lecturers PHILIP ASH, Action Officer, Investigation Branch, OPMG, Hq.DA, U.S. Army; B.S., Wisconsin; M.S., Michigan State

JOSEPH L. CHALK, LL.B., Univ. Baltimore

WARREN I. CIKINS, A.B., Harvard; M.P.A., Harvard

MARY HANNAH CURZAN, B.A., Michigan State Univ.; M.A., Yale

VICTOR H. EVJEN, Assistant Chief of Probation, Administrative Office, United States Courts; B.A., Wittenberg; B.A.S., George Williams; M.A., Chicago

JOHN J. FORD, Psychologist, U.S. Army Scientific Liaison and Advisory Group; B.S., Catholic

JACOB HAGOPIAN, Appellate Military Judge, Board of Review, U.S. Army Judiciary; A.B., George Washington; LL.B., American

CHARLES R. HERMANEK, A.B., Nebraska; M.A., American

JAMES H. HERZOG, Industrial College of the Armed Forces; A.B., North Carolina; M.P.A., Ph.D., Harvard

WALTER KURYLO, Transportation Program Planning Officer; Office of Planning, Bureau of Public Roads, U.S. Department of Commerce; A.A., George Washington, LL.B., B.S., M.A., Ph.D., American

BRIAN T. McDONALD, LL.B., National Univ. School of Law

CHARLES V. MORRIS, Assistant Director, Institute of Correctional Administration; B.S., Boston

GLEN R. MURPHY, Research Consultant, International Association of Chiefs of Police; B.S., Michigan State; LL.B., St. Louis

RICHARD P. NATHAN, B.A., Brown Univ.; M.P.A., Ph.D., Harvard Univ.

NORMAN E. POMRENKE, B.S., Mich. State Univ.; M.S., Florida State Univ.

JACK POSNER, B.S., Queens College; M.E.A., George Washington Univ.; Ph.D., American University

BERTRAM B. SAYMON, A.B., Cornell; LL.B., Fordham Univ. School of Law

JOHN S. THOMSON, Research Intelligence Specialist, U.S. Department of State; A.B., Swarthmore; A.M., Ph.D., Columbia

CORNELIUS W. VAHLE, JR., Director, Editorial Advisory Associates, Operations and Policy Research, Inc.; B.A., St. John's; M.A., Catholic; Ph.D., Georgetown

ERIK J. VESELY, J.D., Prague

DAVID B. WALKER, Staff Director, Subcommittee on Intergovernmental Relations, U.S. Senate Committee on Government Operations; B.A., M.A., Boston; Ph.D., Brown

Lecturers WILLIAM A. ALLEN, Director, The Northern Virginia Police Academy; A.P.A., B.S.P.A., American

ROBERT BARAZ, A.B., Rutgers; M.A., Harvard

SYLVESTER B. BILLBROUGH, Police Management Consultant, International Association of Chiefs of Police; A.B., LL.B., Miami

CHARLES L. COCHRAN, B.S., Mt. St. Mary's College; M.A., Niagara

WAYNE B. COOK, A.B., M.A., Pittsburgh

ROBERT J. CORLETTA, Special Projects Leader, Northern Virginia Regional Planning and Economic Development Commission; B.S., St. John Fisher; M.P.A., Pittsburgh

WILLIAM J. COUPERTHWAIT, Director of Training, Metropolitan Police Department

FRANCIS C. DELUCIA, Director of Educational Programs, Bunker Ramo Data Systems, Inc.; A.B., Temple; M.G.A., Pennsylvania; Ph.D., American

MILAN J. DLUHY, B.A., Illinois; M.A., Southern Illinois

DAVID A. ESPIE, JR., Research Consultant, International Association of Chiefs of Police; B.S., Louisville

FRUZSINA H. FEDLAM, B.A., M.A., American

JAMES A. FIFE, Action Officer, CID Branch, Office of The Provost Marshal General, Hq., Department of the Army; B.A., St. Lawrence; M.A., Alabama

VIVIAN M. KALLEN, M.A., Chicago

NORMAN C. KASSOFF, Training Project Supervisor, Police Training Unit, Professional Standards Division, International Association of Chiefs of Police, Inc.; A.B., LL.B., Miami

PAUL Y. LITTLE, LL.B., Cumberland Univ.

BRIAN T. McDONALD, Labor Law Administration Adviser, U.S. Department of Labor; LL.B., National University School of Law

JOHN A. NOLTE, A.B., George Washington; M.A., American

GEORGE W. O'CONNOR, Director Professional Standards Division, International Association of Chiefs of Police, Inc.; A.B., Dartmouth; Master of Criminology, California

WILLIAM H. OLIVER, B.S., M.A., Kent State

DAVID T. PARRY, Assistant to the President, The Washington Center for Metropolitan Studies, B.A., Pacific; M.A., American

JOHN W. PRICE, Management Analyst, Metropolitan Police Department; A.B., Nebraska; M.A., Michigan State

STEPHEN M. SCHMAL, B.A., Cornell; M.A., American

ANTHONY L. SCHMIEG, Management Consultant, International Association of Police Chiefs, Inc.; B.Sc., Xavier

HAROLD J. SULLIVAN, Assistant United States Attorney, Municipal Court, Criminal Division, U.S. Department of Justice; A.B., Scranton; LL.B., LL.M., Georgetown

JAMES T. SUTER, Assistant Chief, Research and Demonstration Branch, Division of Hospital and Medical Facilities, BSS, U.S. Public Health Service; A.B., M.A., George Washington

EUGENE T. WELLS, B.S., Memphis State; A.M., Washington Univ. (St. Louis); Ph.D., Univ. Kansas

GRANT WRIGHT, Inspector, Commander, Services Division, U.S. Park Police; B.S., Virginia Union

SCHOOL OF INTERNATIONAL SERVICE

y, Purposes, Methods The School of International Service opened in September 1958 as a companion to the School of Government and Public Administration. A gift of one million dollars from the General Conference of The Methodist Church, voted in 1956, enabled the University, under the leadership of President Hurst R. Anderson, to establish a school for the purpose of confronting young men and women with the complex challenges and opportunities which characterize the international dimension of modern life. The term "International Service" conveys a sense of the School's interest not only in traditional career outlets such as the diplomatic service, but also its concern for many diverse but relevant fields such as business and labor overseas, the ministry, teaching, journalism, and an ever-widening range of government careers.

Since its inception the School has enjoyed the support and interest of several American religious bodies. In the early stages of planning, many devoted friends of the new School served on a network of advisory committees which, broadly speaking, laid the foundations of the School's academic program. Coordinating their efforts and overseeing the development of the School through its early years was Dr. Ernest S. Griffith, Dean of the School of International Service from 1958 to 1965. A second stage of development, begun under the deanship of the late Charles O. Lerche (1965-1966), has continued under the present administration. Through its Advisory Council, founded in 1962, the School continues to draw upon the experience of individuals who are prominent in American education and public affairs.

The School of International Service believes that international studies exerts its own special attraction, coupled with its own special difficulties, and that its mastery demands a special type of person. The School therefore endeavors to recruit, both as undergraduate and graduate students, persons marked by certain distinct qualities. These may be summarized as follows:

First, an understanding of and a commitment to the culture and civilization of the United States and familiarity with its history, its institutions, its achievements, and its ideals.

Second, a curiosity about and a sympathetic understanding of cultural variations in the world and the capacity to find in this diversity a source of strength, not discouragement.

Third, a capacity for the study of a foreign language with the aim of using it as a bridge of communications with other peoples and as a means of understanding other cultures.

Fourth, a mature and stable personality developed in full awareness of the range of moral choices open to every thinking man as well as the necessity of choice if a person is to find fulfillment in society.

At the heart of the School's program is a faculty which has demonstrated its interest and involvement in international affairs. Interaction between instructors of varied backgrounds and highly motivated students encourages free inquiry and the exploration of all differences of interpretation, analysis, and recommendation. The student who develops maturity of judgment and the courage to reach and defend his own conclusions is the student who gains the most from his studies at the School of International Service. In its methods of instruction, the School has a strong preference for individual and creative work in small groups as opposed to didactic exercises in the accumulation of data or the memorization and repetition of "established" solutions to difficult problems.

The School's insistence on realism in international studies is heavily reinforced by its location in the District of Columbia. Unmatched library facilities are available, as are other resources (including frequent contact with both American and foreign diplomatic personnel). The executive and legislative branches of the United States government have a long history of cooperation with students from The American University. Students from many lands, including a not inconsiderable number of foreign diplomats, attend the School. Contacts between American and non-American students promote the cultural exchange which many students list among the most valuable features of their years at the School.

UNDERGRADUATE STUDY

The undergraduate programs of the School of International Service are deeply rooted in the liberal arts tradition. All students, during the freshman and sophomore years, are exposed to general studies in the humanities, natural sciences and social sciences to provide them with a basic understanding of these areas of knowledge. Students will usually begin specialization in one of the professionally oriented options or in the general study of international politics during the second sophomore or first junior semester. All undergraduates receive the Bachelor of Arts degree upon completion of all University requirements and the requirements of one of the major programs offered by the School.

Admission to the School See also page 29 for the minimum University admission requirements. See page 379 for further School requirements.

Candidates for admission to the School of International Service must present evidence of outstanding personal and academic qualifications. Eligibility for freshman admission requires (a) at least a "B" average in high school, (b) a rank in the top quarter of the high school graduating class, and (c) College Entrance Examination Board verbal and quantitative aptitude scores totalling at least 1150. (Write to the Director of Admissions of The American University for application information.)

Deadline Application for a given fall semester should be made by the preceding February 1; for a given spring semester, October 1.

Approximately 100 of those eligible are selected for the entering freshman class. Admissions criteria include academic preparation, character and leadership qualities, and personal interests.

The School welcomes early admissions requests from superior students whose scholastic performance and individual maturity ensure successful college work after three years of high school.

Transfers Transfer to the School is open to graduates of accredited junior colleges, students of other accredited colleges or universities, and students in other divisions of The American University after they have completed their freshman year. Applicants must have maintained a "B" average for the academic year preceding their transfer or possess a total cumulative "B" average. Subject matter deficiencies may require additional course work.

Early Admission In addition to the general standards and procedures pertaining to all undergraduate applications, the University offers a special opportunity for early admission. The University welcomes early requests from students (see page 26 for further details).

Advanced Placement and Advanced Standing The School encourages prospective students to participate in the College Level Examination Program or the Advanced Placement Program of the College Entrance Examination Board. All credits earned in either program may be applied toward the 120 semester hours required for graduation and may exempt students from certain University and School requirements.

See page 26 for further details.

Academic Performance Students enrolled in the undergraduate programs of the School are expected to maintain the University minimum academic standard. Students whose academic average falls below this standard at any time must demonstrate adequate reasons why they should be continued in the School of International Service.

General Undergraduate Requirements

The general undergraduate requirements of the School have been designed to offer the undergraduate student a broad foundation in the liberal arts as well as particular preparation for the study of international relations. The basic School requirements are thus oriented to the general University requirements and to preparation for major specialization within the School.

Basic School and University Requirements The relationship between the School and University requirements (see page 29) is accomplished in the following manner:

I. Basic Studies

- A. English: 6 hours satisfied by Composition and Reading I, II or by Honors English I, II
- B. Physical Education: 4 units

II. Humanities: 12 hours

- A. Recommended: 6 hours Western Tradition
- B. Recommended: 6-9 hours American Studies
- C. Recommended: 3 hours Philosophy or Religion

III. Natural Sciences/Mathematics: 12 hours

IV. Social Sciences: 12 hours

- A. Recommended: 3-6 hours Economics
- B. Recommended: 3-6 hours Behavioral Sciences
- C. All School of International Service courses counted in the major will also apply to the University Social Sciences Requirement.

Foreign Language The foreign language requirement may be satisfied in one of the following two ways: (a) four semesters of a foreign language course (elementary and intermediate); (b) waiver. The Department of Languages and Linguistics of the College of Arts and Sciences evaluates the language proficiency of those students who claim a language waiver. If the course option indicated above is elected, the students must complete the requirement with a grade "C" or better.

Graduate Record Examination Students are required to take the Aptitude Section of the Graduate Record Examination during their senior year. The examination is administered by the University Guidance and Testing Office during the fall semester. Students who desire to take other sections of the Graduate Record Examination must make their own arrangements with the Educational Testing Service, Princeton, New Jersey.

Major Programs

The study of international relations is the central component of all undergraduate programs administered by the School, yet the diverse motivations of students interested in world affairs are taken into careful account and, insofar as possible, are allowed for in each major. Many students are interested in the study of international relations as an academic discipline; some wish to direct their undergraduate study toward a professional career in an international field, while others are concerned with a specific geographic area, its language, history, civilization and politics. To accommodate these interests, the School offers undergraduate majors in International Studies and Professional International Service, and administers the joint program in Languages and Area Studies. The requirements for each program are as follows:

International Studies MAJOR REQUIREMENTS (24 hours)

- Introduction to World Politics I and II (33.200-201)
- Contemporary International Politics (33.450) OR Foreign Policies of the Great Powers (33.302)
- American Foreign Policy (33.430)
- Theory of International Relations (33.467) (To be taken during the Senior year.)
- Minimum of nine hours selected from the School's undergraduate international relations course offerings. NOTE: Senior Honors Seminar (33.492) may count toward the major.
- Multi-national Firm (11.626)

ADDITIONAL REQUIREMENTS (3 hours in each of the following fields)

Diplomatic History
Comparative Government
Political Theory

ELECTIVE HOURS: Students are encouraged to develop secondary interests in the social sciences and humanities, developing the equivalent of a minor if they so wish. Electives should be selected carefully in consultation with advisers.

Professional International Service All students who elect the international service major should take the following courses during their freshman and sophomore years so that they will contribute toward fulfillment of the basic School and University requirements. Students who do not take these courses during their first two years will be expected to complete them during their junior and senior years.

American Studies (6 hours)
Introduction to Economics I and II (19.100-101)
Introduction to World Politics I and II (33.200-201)

Programs of Study All students who elect the international service major must select one of the following professional options and complete the courses indicated during their junior and senior years.

FOREIGN SERVICE

Basic Courses:

Problem Papers in American Diplomacy (33.563)
International Law (33.400) or International Organization (33.440)
Political Theory (One course concerning the theory or practice of Communism)

International Economics (19.311) OR Comparative Economic Systems (19.558)

Six hours elected from the following: American Foreign Policy (33.430), History of United States Foreign Policy (29.552-553), Foreign Policies of the Great Powers (33.302), Values and Objectives in Foreign Policy (33.519), World Political Geography (33.308), Overseas Labor (a course).

Seminars. Six hours selected from the following:

History & Theory of International Law (33.661)
Contemporary Problems of International Law (33.662)
Seminar on National Security Policy (75.652)

Integrated Area Seminar, to be taken in semester in which history or international relations is included.

BUSINESS REPRESENTATION OVERSEAS

Basic Courses:

Marketing I (11.300)
International Economics (19.311)
International Business (11.526)
Money and Banking (19.306) OR Economics of Public Finance (19.309)

American Foreign Policy (33.430) OR Contemporary International Politics (33.450)

Six hours elected from the following:

International Marketing Operations (11.528)

Economics Problems of an Area

Three hours elected from the following:

World Labor & Contemporary International Relations I or II (33.641-642)

Labor Economics (19.304)

History of the International Labor Movement (75.672)

INTERNATIONAL CHRISTIAN SERVICE:

Area Specialization:

Both the introductory and integrated area seminars are required from one of the following areas: Africa, Middle East and North Africa, Eastern Asia (Far East), South and Southeast Asia, Latin America, Western Europe. Students are also expected to take the cultural area analysis course related to the area.

Basic Courses:

Six hours elected from the following:

Introduction to the Old Testament (47.150)

Introduction to the New Testament (47.170)

History of Christian Thought I and II (47.370-371)

Comparative Religion (47.383)

Post-Biblical Judaism (47.394)

Ethics (47.310)

Courses are available at Wesley Theological Seminary to advanced students with special permission.

Required Courses:

World Human Needs I and II (33.543-544)

OVERSEAS REPRESENTATION:

Area Specialization (9-15 hours):

This requirement can be fulfilled by taking either integrated area seminars or courses or a combination of both in one of the following areas: Africa, Far East, Latin America, Middle East, South and Southeast Asia, Western Europe.

International Communications and Mass Media: (6 hours elected from the following):

Foundations of International Communication (75.639)

Psychological and Cultural Bases of International Politics (75.633)

International Political Communication (75.650)

Information & Persuasion in Cross Cultural Contacts (75.638)

News Reporting (17.320)

Feature Writing (17.325)

Mass Media in Society (17.503)

Public Relations Overseas (17.543)

Economics and Overseas Labor: (3 hours elected from the following):

International Economics (19.311)

World Labor & Contemporary International Relations I or II (33.641-642)

History of the International Labor Movement (75.672)

Social & Labor Problems of Underdeveloped Areas (75.675)

Foreign Policy and Political Theory : (6 hours elected from the following, including one course on the theory or practice of communism.)

History of United States Foreign Policy I or II (29.552-553)

Foreign Policies of the Great Powers (33.302)

American Foreign Policy (33.430)

Values and Objectives of Foreign Policy (33.519)

Political Theory (one course)

OVERSEAS AND INTERNATIONAL LABOR:

Basic Courses:

Labor Economics (19.304)

History of the United States Labor Movement (19.572)

Labor Statistics (19.575)

Foreign Policies of the Great Powers (33.302)

History of the International Labor Movement (75.672)

World Political Geography (33.308)

International and Overseas Labor:

Students must take nine hours of international labor courses in excess of those courses indicated above and must include one course of labor in an area within the nine hours.

Languages and Area Studies

The degree program in languages and area studies is offered for the following areas: (A) French or German language—Western Europe; (B) Russian language—Soviet Union-Eastern Europe; (C) Spanish language—Latin America; (D) Hindi or Indonesian or Thai language—South and Southeast Asia; (E) Chinese or Japanese language—Far East. These programs are offered jointly by the School of International Service and the Department of Languages and Linguistics. See also page 154 for further details.

PROGRAMS (A), (B) AND (C):

Prerequisite:

Two years of four-meetings-per-week of an appropriate language.

Required Courses: 35 hours in the following course work:

Advanced Language I and II (4-4)

Advanced Reading and Composition I and II (3-3)

Civilization (of area) I and II (3-3)

Introduction to World Politics I and II (3-3)

Three approved area subject courses, seminars or colloquia (3-3-3)

Related Courses: 12 hours in the following fields:

Second language of the area

International relations of the area

Government and Politics

Literature of the area

History of the area

Linguistics

Geography of the area

Economic problems of the area

Examination:

Oral comprehensive examination to test language competence and knowl-

edge of the area. Graduate Record Examination is optional.

Electives:

Completion of a minimum of 120 hours plus non-credit physical education.

PROGRAMS (D) AND (E):

Required Courses: 36 hours in the following course work:

Elementary Language I and II (4-4)

Intermediate Language I and II (4-4)

Advanced Language I and II (4-4)

Introduction to World Politics I and II (3-3)

Two approved area subject courses or seminars (3-3)

Related Courses: 12 hours in the following fields:

Second language of the area

Government and Politics

Intermediate and/or Advanced year of a European language

International relations of the area

History of the area

Linguistics

Geography of the area

Economics of an area

Examination:

Oral comprehensive examination to test language competence and knowledge of the area. Graduate Record Examination is optional.

Electives:

Completion of a minimum of 120 hours plus non-credit physical education.

GRADUATE STUDY

The School of International Service is committed to promoting high scholarly achievement in its graduate programs. Its faculty strives to imbue the graduate student body with superior standards of scholarship and research. The aim is to give students a sound substantive preparation and a thorough grounding in the methodology of each field of concentration at the graduate level.

Admission (See also pages 31-45.)

Admission to graduate study in the School of International Service is restricted to students who have earned at least a "B" average in a relevant undergraduate major as well as a cumulative "B" average in all undergraduate work at an accredited institution. A relevant major is defined as a minimum of 24 hours in subjects appropriate to the degree program selected. All applicants for the master's degree programs are required to take the Aptitude Section of the Graduate Record Examination. Students who fall short of the 24 hours of relevant graduate work will be expected to complete additional course work at The American University, to be determined at admission or upon selection of a major program.

Applicants for the Ph.D. degree must possess a master's degree, or its equivalent, earned in a relevant discipline from an accredited institution with a cumulative average in all graduate courses of substantially higher than "B". Applicants must supply at least two letters of reference from persons capable of evaluating their graduate course work.

Full-time and part-time graduate students, whether aiming for the master's or doctoral degree, will be admitted within the educational capacity of the School of International Service. Preference is given to those applications received before February 1st for summer and fall admission, and before October 1st for spring admission.

Advancement to Candidacy

Admission to a graduate program does not entail automatic advancement to candidacy for a graduate degree. Each is a separate step, and advancement is a discretionary act which takes place upon completion of specified requirements.

At the time of advancement the student selects, in consultation with his program adviser, his comprehensive examination fields and the required tool—or tools—of research. He then files the appropriate form with the office of the Dean.

The candidate applies separately for his comprehensive examinations (before the deadline dates announced in the *Schedule of Classes Bulletin*), filing an appropriate form with the Dean of Graduate Studies after securing the written approval of the Dean of the School.

M.A. and M.I.S. Degrees

Master's degree students may apply for advancement to candidacy when they have completed between 12 and 18 hours of graduate work at The American University (with an average of "B" or better), have completed all deficiencies specified at the time of admission, and have made up all incomplete course work. If at the end of 18 hours, or at any time thereafter, the student's average is less than "B," he will be dismissed from the University.

Students may transfer up to six hours of graduate work taken at another approved institution provided that the credits are relevant to the student's program and provided that a "B" or better was earned for each course.

Ph.D. Degree

Doctoral degree students who have completed 30 hours of graduate work, including the master's program if this degree has been secured, and at least 15 additional hours *in residence* at the University, *may* apply for advancement to candidacy if their grade average in all graduate work taken at the University is better than "B". Application *must* be made not later than the end of the semester in which 18 semester hours of graduate work will have been completed in residence at the University, subsequent to admission to the doctoral program. If a student is ineligible for advancement at that time, his work at the University will be terminated. It will also be terminated if the grade average falls below the minimum requirement at any time thereafter.

If the master's degree has been received at the University, a doctoral degree student *may* apply for advancement to candidacy after completing 12 graduate hours beyond the master's degree. However, he *must* apply no later than the end of the semester in which 18 semester hours of graduate work will have been completed beyond the master's degree.

Transfer Credit

Transfer credit for prior work taken at other institutions is usually granted at the time of advancement to candidacy. In order to be transferred, the

credits earned elsewhere must be graduate level courses in which a grade of "B" or better was earned, taken after the student received the Bachelor's degree, and they must be judged appropriate to the student's degree program. Official transcripts must be provided to support requests for acceptance of transfer credit.

Graduate Degree Programs

Graduate degrees offered by the School of International Service are (1) the Master of Arts in International Studies, (2) the Master of Arts in Languages and Area Studies (Far East, Latin America, South and Southeast Asia, Soviet Union and Eastern Europe, and Western Europe), (3) the Master of International Service, and (4) the Doctor of Philosophy in International Studies.

The Master of International Service (M.I.S.) is a professional degree designed to prepare students for careers both in the United States and abroad. The Master of Arts in International Studies is an academic degree designed to prepare students for subsequent doctoral work and for careers in teaching. The Master of Arts in Languages and Area Studies, which is administered jointly by the School of International Service and the Department of Languages and Linguistics of the College of Arts and Sciences, contains features which are both professional and academic in nature. It requires mastery of a language or languages of an area together with an integrated knowledge of the history, society, economy, and politics of that area.

The degree program for the Doctor of Philosophy in International Studies emphasizes a disciplinary core while permitting the student considerable choice in selecting his fields of specialization. The degree draws its primary content from the fields of international relations and comparative politics. Inherent in its requirements is the recognition that the international behavior of nations is increasingly a product of their internal political dynamics. The degree in International Studies entails foreign area specialization—the exact amount depending upon the needs and objectives of the student. The School also encourages its Ph.D. candidates to develop competence in an additional discipline of the social sciences, such as history, economics, anthropology, or sociology.

Master of Arts in International Studies

Course Requirements Required is a minimum of 30 hours of approved graduate credit, exclusive of deficiencies assessed at the time of admission, of which three to six may be in the Master's Thesis Seminar (33.797). All graduate students in International Studies are required to take International Relations and Comparative Politics: Methods and Approaches (33.610).

Language Requirement Candidates must pass a tool of research examination in one modern foreign language. If they demonstrate proficiency in a language, they may, in addition, offer an approved quantitative tool. (For details of language requirements, see page 393.)

Comprehensive Examinations Two written comprehensive examinations are required. (1) Theories of International Relations and Comparative Politics is required of all candidates for the Master of Arts in International Studies. (2) The second field is selected by the student in consultation with his faculty

adviser and must be certified by the Dean. See page 394 for a list of approved comprehensive fields administered by the School of International Service.

Research Requirement All candidates for this degree must write either a thesis, which may earn three or six semester-hour credits of the 30 required for the degree, or two substantial research papers (non-thesis option) prepared in conjunction with .600 or .700 level seminars, or two .690 Independent Research Projects, or a combination of these. Students must apply for the non-thesis option in the office of the Dean at the beginning of the semester in which the projects are to be written.

Doctor of Philosophy in International Studies

Course Requirements A minimum of 72 hours of graduate work is required, exclusive of deficiencies assessed at the time of admission, of which a total of up to twelve may be in the Doctoral Dissertation Seminar (33.799). A minimum of 18 hours must be in courses open only to graduate students (.600 and .700 level).

Tools of Research Each candidate must satisfy examiners that he is proficient in two tools of research. One of these must be a modern foreign language; the second may be another foreign language, statistics, or another quantitative tool approved by the Dean. (For details of language requirements, see page 393.)

Comprehensive Examinations Candidates must take written examinations in four fields as follows:

- A. Theories of International Relations and Comparative Politics
- B. One of the following:
 1. International Law
 2. International Organization
 3. Comparative Government
 4. International Economic Policy
 5. Economic Development Policy
 6. A core field, at the Ph.D. level, from anthropology, history, or sociology, provided that the examination is primarily theoretical and methodological in content.
- C. A field involving international relations analysis and focusing on foreign policy formulation in one of the following areas:
 - The United States
 - Western Europe
 - The Union of Soviet Socialist Republics and Eastern Europe
 - Middle East and North Africa
 - Latin America
 - Far East
 - South Asia and Southeast Asia
- D. A second field from B or C above or another field selected in consultation with a faculty adviser and certified by the Dean.

See page 394 for the School's list of examination fields. Other fields will be found in the appropriate school or departments in the *Catalog*.

NOTE: Candidates who have received a double distinction on the same examination taken at the master's level at SIS may waive a comprehensive examination from categories B, C, and D. Field A, Theories of International Relations and Comparative Politics, may not be waived. See page 40 for details of the grading system.

Research Requirement All candidates for the degree must write a dissertation and defend it orally. During the oral examination, dissertation committee members may test the candidate's knowledge not only of the subject of the dissertation, but of related materials as well. All doctoral candidates must take the Doctoral Dissertation Seminar (33.799) for as many as twelve hours, which normally are deducted from the 72 graduate course hours required for the degree.

See page 41 for further details concerning the doctoral dissertation.

Master of Arts in Languages and Area Studies

This degree is administered jointly with the Department of Languages and Linguistics of the College of Arts and Sciences (see page 156). The language-area groups currently authorized under the degree program are as follows:

- (A) French or German Languages—Western Europe Area Studies
- (B) Spanish Language—Latin American Area Studies
- (E) Russian Language—USSR and Eastern Europe Area Studies
- (D) Hindi, Indonesian, or Thai Languages—South and Southeast Asia Area Studies
- (E) Chinese or Japanese Languages—Far East Area Studies

PROGRAMS (A), (B), AND (C)

Prerequisite

The Bachelor of Arts or its equivalent is required. The student's background must have included three years of the appropriate language and one year (6 credits) of history, politics, geography, or other area-related discipline.

Required Courses

A total of 30 hours of approved graduate work exclusive of deficiencies assessed at the time of admission is required:

- 12 hours in literature and/or area subject courses taught in a language of the area.
- 12 hours in area subject courses taught in English in the School of International Service, other schools and departments of The American University, or The Consortium of Universities.

Research Requirement

All candidates for this degree must write either a thesis, credited with from three to six semester hours of the 30 required for the degree, or two substantial research projects (non-thesis option) prepared in conjunction with .600 and .700 level seminars, or two independent research projects (.690), or an approved combination of these. Students must apply for the non-thesis option in the office of the Dean of the School of International Service at the beginning of the semester in which the paper is written.

Qualifying Examination

Each candidate must pass an oral examination to determine his readiness for written comprehensive examinations.

Comprehensive Examinations

Candidates must take written examinations in two fields selected in consultation with a faculty adviser and certified by the Dean of the School of International Service.

PROGRAMS (D) AND (E)

Prerequisites

The Bachelor of Arts or its equivalent is required. The student's background must have included at least two years of the appropriate language and one year (6 credits) of history, politics, geography, or other area-related discipline.

Required Courses

6 hours in literature and/or area subject courses taught in a language of the area are required.

18 hours in area subject courses (taught in English) in the School of International Service, in other schools and departments of The American University, or in the Consortium of Universities are required. With special permission, up to 6 hours may be earned by taking the third (Advanced) year of an appropriate area language.

Research Requirement

All candidates for this degree must write either a thesis, credited with from three to six semester hours of the 30 required for the degree, or two substantial research projects (non-thesis option) prepared in conjunction with .600 and .700 level seminars, or two independent research projects (.690), or an approved combination of these. Students must apply for the non-thesis option in the office of the Dean of the School of International Service at the beginning of the semester in which the paper is written.

Qualifying Examination

Each candidate must pass an oral examination to determine his readiness for written comprehensive examinations.

Comprehensive Examinations

Candidates must take written examinations in two fields selected in consultation with a faculty adviser and certified by the Dean of the School of International Service.

Master of International Service

Prerequisites Students who have already completed satisfactorily the School's requirements for the Bachelor of Arts in International Service degree should be able to obtain the Master of International Service degree in one further academic year. Graduates of other colleges or universities are required to fulfill special requirements for the acceptance of equivalent courses taken at other schools, or to take courses at the University in lieu of those not approved as equivalent. Students who have not completed an undergraduate curriculum substantially similar to these requirements will normally require one and one-half years to obtain the degree.

Course Requirements All graduate students in the International Service Program are expected to complete all courses listed under *one* of the following professional options unless they are presented at admission or satisfied by courses included in the undergraduate program as equivalent.

FOREIGN SERVICE

Courses:

Problem Papers in American Diplomacy (33.563)—3 hours, with 3 additional hours optional.

American Foreign Policy (33.630), or U.S. Diplomatic History (29.552-553)—3 hours

Seminar in American Civilization (33.604)—3 hours

Political Theory (including treatment of theory or practice of communism)—3 hours

International Economics: one course selected from International Economics or Economics Systems as offered by the Department of Economics—3 hours

Note: Students who have not completed an acceptable course in international law or international organization at the time of admission will be expected to take international law or organization as a part of their graduate program.

Seminars

Students in the 45 hours program will be required to take 12 hours of seminar work from available offerings; those in the 30 hours program are required to take 6 hours. Integrated seminars may be taken for 6 hours credit in that semester in which history or international relations is included.

30 Hour Program 1) One approved seminar (6 hours) or two or three seminars in related fields.

45 Hour Program 1) One approved 6 hours seminar plus either a second 6 hour seminar *OR* two 3 hour seminars in related fields, *OR* 2) One 3-6 hour area seminar (South and Southeast Asia—3 hours) plus another 6-9 seminar hours, the latter preferably not in the same geographical area as the 3-6 hour seminar.

BUSINESS REPRESENTATION OVERSEAS

Basic Courses

Students must complete 24 hours of courses required in the undergraduate Business Representation Overseas professional option unless previously taken or unless substitutes have been approved.

Advanced Courses

Seminar in International Business (11.726)

Current International Economic Problems (19.752)—3 hours

Comparative Labor Relations (19.574)—3 hours

Seminars

One approved seminar (6 hours) or two 3 hour seminars in related fields.

Area Specialization

12 hours of integrated area seminars or comparable courses related to one of the following: Africa, Middle East and North Africa, Far East, South and Southeast Asia, Latin America, Western Europe. Students are also expected to include the cultural area analysis courses related to the area. Exceptions can be made in consideration of previous courses and overseas experience.

Courses

World Human Needs I and II (33.543-544)—6 hours

Other courses may be selected from the catalogs of The American University, Wesley Theological Seminar, and the Consortium of Universities. Consultation is recommended for adapting the graduate program to the student's special interests and needs.

OVERSEAS REPRESENTATION

Courses

Seminar in American Civilization (33.604)—3 hours

Area Specialization

6-12 hours. This requirement can be fulfilled by taking either integrated area seminars or courses or a combination of both in one of the following areas: Africa, Far East, Latin America, Middle East, South and Southeast Asia, Western Europe.

International Communications and Mass Media:

6 hours selected from the following

- Psychological & Cultural Bases of International Politics (75.633)
- Foundations of International Communications (75.639)
- International Political Communications (75.650)
- Information & Persuasion in Cross Cultural Contacts (75.638)
- Mass Media in Society (17.503)
- Public Relations Overseas (17.543)
- News Reporting (17.320)
- Feature Writing (17.325)

International Economics & Labor—3 hours elected from the following:

International Economics: One course selected from International Economics or Economic Systems as offered by the Department of Economics

World Labor and Contemporary International Politics I or II (33.541-542)

History of International Labor Movement (75.672)

Social and Labor Problems of Underdeveloped Areas (75.575)

Foreign Policy and Political Theory—6 hours elected from the following (including one course on the theory and practice of communism):

- History of U.S. Foreign Policy I or II (29.552-553)
- Foreign Policies of the Great Powers (33.302)
- American Foreign Policy (33.630)
- Contemporary International Politics (33.650)
- Values and Objectives in Foreign Policy (33.519)

Additional Requirements for M.I.S. Degree

Language Requirement Candidates for the M.I.S. degree must pass a tool of research examination in one modern foreign language. The examination consists of a written translation.

Comprehensive Examinations All graduate students in the international service program must take two written comprehensive examinations. See the list of the School's examinations on page 394. The examinations required for each professional option are as follows:

Foreign Service:

A. One of the following:

- International Organization
- International Law
- National Security Policy
- International Economics

B. Either American Foreign Policy or U.S. Diplomatic History

Business Representation Overseas:

A. International Economics or an approved field in Economics

B. International Labor Problems or International Business

International Christian Service:

A. An Area Comprehensive

B. One of the following:

- Cultural Analysis: (An Area)
- Economic Development Policy
- International Law
- Theories of International Relations and Comparative Politics
- Foreign Policy Analysis of an area
- Comparative Religion
- World Christian Missions

Overseas Representation:

A. An Area Comprehensive

B. One of the following:

- American Civilization
- American Foreign Policy
- U.S. Diplomatic History
- Cultural Analysis: (An Area)
- International Communications

Overseas and International Labor:

A. International Labor Problems

B. Labor in an area

Intelligence Research and Analysis:

A. An Area Comprehensive

B. National Security Policy

Research Requirements All candidates for this degree are required to write either a thesis, which may earn three or six semester hours of the total hours required for the degree, or to write two substantial research papers (non-thesis

option) prepared in conjunction with .600- or .700-level seminars, or to write two .690 independent research projects, or an approved combination of these. Students must apply for the non-thesis option in the office of the Dean of the School at the beginning of the semester in which the project is to be written. Students may petition the Sub-Faculty on Professional International Service, with the approval of the appropriate program chairman, to have a single substantial research paper, written in conjunction with one of the professional seminars listed above, approved as satisfying the research requirement for the Master of International Service degree.

Language Requirements for All Graduate Degrees

All candidates for the M.A. in International Studies and the Master of International Service must pass a tool of research examination in one modern foreign language. Doctoral candidates must pass a tool examination in at least one modern foreign language. The Ph.D. language examination may be somewhat more difficult in content and wording than the examination for the master's degree, but the format of the examination is the same.

The examinations consist of a written translation into English of a foreign language text taken from the area of the student's specialization. Time allotted is one hour. The use of the dictionary is permitted.

Before the Department of Languages and Linguistics can administer the tool examination, the candidate must fill out the "Approval of a Tool of Research" form and receive approval from the Dean of the School for the language he has selected. Only those foreign languages may be selected for which an examiner is available. If the Department of Languages does not have a qualified examiner, the services of an outsider may be solicited by the School.

Exemptions Both master's and Ph.D. candidates who have a native or near native proficiency in the foreign language approved as a tool are exempt from the tool examination. Such exemption must be certified by the Department of Languages and Linguistics.

The language requirement for all master's degrees will be considered met for candidates who have attained a "3-level" of proficiency in both speaking and reading a modern foreign language, as certified by the Foreign Service Institute of the Department of State; doctoral candidates must have attained a "4-level" of proficiency in speaking and reading a modern foreign language, as certified by the Foreign Service Institute. Tests conducted more than three years prior to the date on which the candidate passes his comprehensive examinations are not acceptable.

Waiver of Language Requirements Doctoral candidates who have completed the second semester of a European language at the advanced level or the second semester of a non-European language at the intermediate level within the three years prior to the date on which the candidate passes his comprehensive examinations, with a grade of "B" or better at a recognized institution, may be exempt from the tool examination.

With special approval of the Dean of the School and the appropriate

tool examiner, the results of tool examinations passed at other institutions within the three years prior to certified completion of the comprehensive examinations may be accepted as fulfillment of the tool requirement. Documents certifying such results must be submitted.

Master's candidates who have completed the second semester of the intermediate level in a European language or the second semester of intensive elementary work in a non-European language (at least 12 semester hours) within the two years prior to the date on which they passed their comprehensive examinations, with a grade of "B" or better at a recognized institution, may be exempt from the tool examination.

With special approval of the Dean of the School and the appropriate tool examiner, the results of tool examinations passed at other institutions within the two years prior to certified completion of comprehensive examinations may be accepted as fulfillment of the requirements. Documents certifying such results must be submitted.

Candidates for the Master of Arts in Languages and Area Studies satisfy their language tool of research requirements by virtue of successful completion of their degree programs.

Comprehensive Examination Fields The School of International Service offers the following fields for comprehensive examinations at the master's and doctoral levels. All applicants for the examinations must use the following list regardless of previous admission dates or advancement to candidacy:

- 33.001 International Law
- 33.002 International Organization
- 33.003 Theories of International Relations and Comparative Politics
- 33.004 National Security Policy (M.A. and M.I.S. candidates only)
- 33.010 Foreign Policy Analysis: The United States
- 33.011 Foreign Policy Analysis: Western Europe
- 33.012 Foreign Policy Analysis: Soviet Union and Eastern Europe
- 33.013 Foreign Policy Analysis: Middle East and North Africa
- 33.014 Foreign Policy Analysis: Africa
- 33.015 Foreign Policy Analysis: Latin America
- 33.016 Foreign Policy Analysis: Far East
- 33.017 Foreign Policy Analysis: South and Southeast Asia
- 33.021 Area Comprehensive: Western Europe
- 33.022 Area Comprehensive: Soviet Union and Eastern Europe
- 33.023 Area Comprehensive: Middle East and North Africa
- 33.024 Area Comprehensive: Africa
- 33.025 Area Comprehensive: Latin America
- 33.026 Area Comprehensive: Far East
- 33.027 Area Comprehensive: South and Southeast Asia

SCHOLARSHIPS AND FELLOWSHIPS

Undergraduate Scholarships School of International Service students interested in securing financial assistance should write to the Director of Student Financial Aid, The American University, for application materials.

Graduate Scholarships and Fellowships Students who are interested in obtaining financial assistance should consult the section of this catalog on graduate scholarships and financial aid for the application procedures. Graduate awards are extended to applicants who have demonstrated scholastic excellence and who give promise of distinguished academic performance and future contribu-

tions in the study or practice of world affairs. Outstanding citizenship and character and sound educational objectives are considered as well.

The following awards are of special interest to students pursuing graduate degrees in the School of International Service.

Students are urged to consult with the Office of Graduate Studies for a complete list of those University awards for which S.I.S. students are eligible.

NATIONAL DEFENSE EDUCATION ACT (TITLE VI) AREA-LANGUAGE FELLOWSHIPS: \$2,000-\$2,400 per year plus \$400 for each dependent and tuition remission for 12-15 hours each semester. Depending upon the allocation of awards by the U.S. Office of Education, for study of the areas and languages of South and Southeast Asia, Far East, Latin America, and U.S.S.R. (Russian).

NATIONAL DEFENSE EDUCATION ACT (TITLE IV) FELLOWSHIPS in INTERNATIONAL STUDIES: \$2,000-\$2,400 per year plus dependent and tuition allowances. Awards are made available to students with a commitment to teaching as a profession.

In INTERNATIONAL STUDIES, graduate assistantships, \$650 per year, requiring 15-20 hours of academic duties per week.

In INTERNATIONAL STUDIES, teaching assistantships, \$2,000 plus remitted tuition.

UNITED CHURCH Scholarships in International Studies, in varying amounts up to full tuition.

EPISCOPAL CHURCH Fellowships in International Studies, in varying amounts up to full tuition.

STUDENT ORGANIZATIONS AND AWARDS

Undergraduate Student Committee

During the Fall semester of each year the undergraduate student body of the School elects a committee of two representatives from each class. The purpose of the committee is to work with the administration and faculty of the School to maintain close student-faculty relationships. The committee also assists in the coordination and implementation of the activities of the School, such as the annual dinner, which is held in the Spring semester.

Graduate Student Council

The Council is composed of representatives of the School's graduate student body and functions essentially in the same manner as the Undergraduate Student Committee. The group provides valuable assistance to the administration and faculty of the School by promoting meaningful relationships between the faculty and graduate students.

Political Science Honorary Fraternity

Beta Psi Chapter of Pi Sigma Alpha, national political science honorary fraternity, was chartered at The American University in 1955. Every student candidate must have completed at least 12 semester hours of work in government, public administration, political science and international relations, including at least one course not open to students in the first two years of collegiate work. The student must have maintained an average grade of "B" or higher in all the above-named courses, and, in addition, he must have maintained general scholarship sufficient to place him within the upper third of his class. Pi Sigma Alpha sponsors public lectures in the field of government

and public administration and other projects. It is an especially important organization for the graduate student of the School.

Pan-Ethnon Society The Pan-Ethnon Society is a University international relations organization which works in close cooperation with the School. With the assistance of a group of SIS faculty wives, it serves as host for Wednesday afternoon coffee hours which feature talks by government officials, foreign diplomats, and others in the Washington area. It also holds other meetings with outside speakers and sponsors; it arranges embassy visits and other trips. Many students are active in similar related University organizations such as the French Club, German Club, Russian Club, and Spanish Club.

Awards Students in the School of International Service are eligible for a number of annual awards, including the following:

ALAN M. BRONNER MEMORIAL AWARD

This award was established in 1961 by friends and associates of the late Alan M. Bronner, one of the most outstanding and best loved students in the life of the School. The award is co-sponsored by the School of International Service and Pi Gamma Mu and is awarded for distinction in international cultural and political studies.

PITMAN B. POTTER MEDAL

This award medal was established in 1960 as a tribute to Dr. Pitman B. Potter, former Professor of International Law at The American University, who has distinguished himself widely as an outstanding and scholarly contributor to the study of International Law and Organization. The award is given each year to that student, undergraduate or graduate, who is distinguished for outstanding excellence in the field of International Law and Organization.

BENOY KUMAR SARKAR MEMORIAL PRIZE

In 1962, through the support of the Taraknath Das Foundation, The American University initiated an annual award to the student submitting a superior original work dealing with any aspect of the civilizations of South and Southeast Asia. Undergraduate or graduate students are eligible for the award after submitting, normally, a written essay, thesis, or dissertation on a subject involving new research and original thought relating to any discipline in the social sciences, humanities, fine arts or natural sciences.

FRANK WILLIS SCOTTON AWARD

This award is made annually to the student who is considered to be the most outstanding member of the graduating class of the School of International Service. The award commemorates Frank Willis Scotton who was killed in World War II in the service of his country and who is the father of a former student in the School of International Service.

FRESHMAN ESSAY PRIZES

Book prizes are awarded each year (three each semester) for the outstanding essays submitted in connection with the regular course work.

SPECIAL FEATURES OF THE SCHOOL

The Consortium
of Universities See page 24.

Business Council for International Understanding Training Program

In 1959 the Business Council for International Understanding selected the School as its Washington base for a program to provide additional preparation for business executives on international assignment. The BCIU Training Program attempts to foster a better understanding of cross-cultural differences; of the social, political and economic makeup of the country and area; and of techniques which will make them more effective representatives of their respective companies and better interpreters of the United States. There is also intensive foreign language study for those who wish it. Through the facilities of the federal government, international organizations, and foreign embassies, the participants have access to private consultation on questions of special interest to them.

The Director of the Program from 1959 to 1968 was Dr. Harold M. Randall, former U.S. representative (with the personal rank of Ambassador) to the Inter-American Economic and Social Council for the Organization of American States. The Director as of summer 1968 is Dr. Richard Butwell, Professor in the Center for South and Southeast Asian Studies and until June 1968, Director of the Patterson School of Diplomacy and International Commerce, the University of Kentucky.

For additional Program information write to the Office of the Director, BCIU Program, School of International Service, The American University, Washington, D.C. 20016

Institute on the United States in World Affairs

The institute is a summer program offered under the auspices of the School of International Service. Beginning in 1945, the institute has met each summer at The American University. The goals of the Institute are: (a) to study the processes of formulation and methods of implementation of U.S. foreign policy, (b) to analyze the principal issues involved in the position of the U.S. in world affairs, (c) to provide tools for more advanced theoretical study and a capacity to deal more competently with international relations. The program involves a combination of lectures, seminars, readings, and field trips. For additional information write to the Director, USWA, School of International Service, The American University, Washington, D.C. 20016

Center for South and Southeast Asian Studies

The Center for South and Southeast Asian Studies, established in 1965 in the School of International Service, administers a program of studies and sponsors research on the countries in south and southeast Asia. The major disciplines in the social sciences and humanities are represented in the Center faculty or are under development as components of Center programs. Graduate students may take their degrees in the participating departments or in the School of International Service. At the M.A. level, students may work for a language and area degree; at the doctoral level, they may include a large amount of area work in their program for the Ph.D. in International Studies. Programs provide a combination of disciplinary, area, and language training. The resources of The American University in South and Southeast Asian

Studies are supplemented by those of the Consortium of Universities.

The Director of the Center is Dr. Kenneth P. Landon, former International Relations Officer in Southeast Asian Affairs for the Department of State. For additional information write to the Office of the Director, Center for South and Southeast Asian Studies, School of International Service, The American University, Washington, D.C. 20016

COURSES OF STUDY

The courses that follow are divided into the general categories which comprise the study of international relations and geographical areas in the School of International Service. The undergraduate curriculum of the School is listed as a separate category. Graduate seminars at the .700 level all carry prerequisites for admission, usually 9-12 hours of relevant courses. Such seminars may be taken more than once for credit provided that the seminar content is non-duplicating. Courses at the .600 and .700 level presuppose 9-12 hours of lower level courses as prerequisites or taken simultaneously with permission of the instructor. Courses and seminars taught at the .600 and .700 level are limited to graduate students who have been admitted to a degree program, and qualified seniors whose curriculum requires such courses. Non-degree students may not enroll in these courses. Courses at the .500 level require a minimum of six hours of relevant undergraduate courses as prerequisites or permission of the instructor.

It is the policy of the School to schedule separate courses and seminars for graduates and undergraduates. The differentiation is one of level and depth rather than of substantive content. No student may receive credit for a graduate level course if the same course was taken at the undergraduate level for credit.

UNDERGRADUATE COURSES

33.100-101-102 ✓ **American Civilization I-III (3,3,3)**

American Civilization I and II serve as introductory courses to the government, economics, social structure, arts, religion and other aspects of the contemporary United States.

33.150-151 ✓ **Introduction to the Western Tradition I, II (3, 3)**

This two-semester sequence serves as a basic introduction to Western European intellectual history and provides a frame of reference for later studies of the dynamics of modernization and the transition from traditional to secular society.

33.200 ✓ **Introduction to World Politics I (3)**

Concepts and Principles. A survey emphasizing the nature of interstate relations, factors influencing those relations, and the causes and consequences of international instability. Particular attention is paid to the sources and types of international conflict and to the techniques of conflict resolution.

33.201 ✓ **Introduction to World Politics II (3)**

Patterns of Development. Study and relation of concepts of international politics discussed in 33.200 (e.g., balance of power, imperialism, international

law, international organization) to select phases in the development of modern world politics.

33.302 Foreign Policies of the Great Powers (3)

Comparative analysis of the historic evolution of the foreign policies of the major powers, with special emphasis on the period since World War II and on such issues as security, imperialism, international cooperation, international organization, and the impact of technology.

33.350 Introduction to the Non-Western World (3)

This course builds upon the basic conceptual framework developed in Introduction to the Western Tradition and provides the student with the tools for in-depth study of non-Western areas.

33.400 Introduction to International Law (3)

Nature, sources and development of international law and its most important substantive elements. Emphasis on the place of international law in relation to other international studies.

33.403 American Civilization : Senior Seminar (3)

Topics vary. (May be taken more than once for credit if the content is non-duplicating.)

33.410 Introduction to the Middle East (3)

33.412 Introduction to Russia (3)

33.414 Introduction to Latin America (3)

33.415 Introduction to South Asia (3)

33.417 Introduction to Southeast Asia (3)

33.418 Introduction to the Far East (3)

33.420 International Relations of Western Europe (3)

33.422 Soviet Russia in World Affairs (3)

33.424 Introduction to Africa (3)

33.425 International Relations of the Middle East (3)

33.426 South Asia in World Politics (3)

33.427 International Relations of Southeast Asia (3)

33.428 Far East in World Affairs (3)

33.429 International Relations of Latin America (3)

33.430 American Foreign Policy (3)

The development of the diplomatic process including the role of the President, and Department of State in foreign affairs. Significance of international institutions in American diplomacy.

33.432 International Relations of Eastern Europe (3)

33.439 Foundations of International Communications (3)

The conceptions, problems, and techniques of international communication in terms of individual and group behavior as represented in social psychology and allied disciplines.

33.440 Introduction to International Organization (3)

A study of the organizational system of the international community; processes and institutionalized forms of international order.

33.450 Contemporary International Politics (3)

An examination and analysis of the course of international politics since the

end of World War II. Topics covered include the Cold War, the non-western revolution, the industrial, technological and military revolutions, and the changing role of international organizations.

33.451 United Nations Organization and Functions (3)

The Charter, origins, functions, operation of the principal organs with emphasis upon the General Assembly and the Security Council, admission of members, obligation of membership.

33.460 Behavioral Approaches to International Politics (3)

33.467 Theory of International Relations (3)

A study of the various theories of international relations.

33.492 Senior Honors Seminar (3-6)

Selected topics. Participation by invitation of the faculty.

ADVANCED COURSES

THEORY

33.519 Values and Objectives in Foreign Policy (3)

Prerequisite: 6 relevant hours in either diplomatic history, ethics and/or international law. Role of ethical considerations in foreign policy. Meanings of national interest. Power, reason, and value as determinants.

33.610 International Relations and Comparative Politics: Methods and Approaches (3)

An introduction to the methodology of the field.

75.569 Philosophic and Religious Aspects of World Relations (3)

Prerequisite: Introductory course in philosophy or political theory and a course in international relations. An inquiry into the philosophical and religious issues raised and presupposed by present day world conditions.

75.612 Seminar: Topics in Political Thought (3)

Intensive investigation of topics concerning concepts, movements, ideologies and significant theorists.

33.667 Theory of International Relations (3)

A study of the various theories of international relations.

33.668 Liberal Theories of World Politics (3)

A comparative analysis of the views on world politics of some twelve major liberal statesmen and philosophers of the 19th and 20th centuries. The focus will be on the light their doctrines cast on the problems of achieving a liberal world order.

33.710 Seminar in Theories of International Relations (3)

An examination and analysis of the various trends and theories of international relations.

International Law and Organization

33.600 Introduction to International Law (3)

Nature, sources, and development of international law and its most important substantive elements. Emphasis on the place of international law in relation to other international studies.

75.641 Seminar on International Administration (6)

Prerequisite: At least one course in international organization or public

administration, or permission. Nature and history of international administration, and its meaning within the study of international relations and organization. Theory and practice of functionalism. Secretariat structure and operation, with emphasis upon the League of Nations and the United Nations. Special problems of administration at the international level.

33.661 Seminar: History and Theory of International Law (6)

Prerequisite: International law and/or organization. Development of international law from the earliest times. Leading theories of the sources, origin, and binding force of international law. Study and discussion of the classic publicists. Individual research projects.

33.662 Seminar: Contemporary Problems in International Law (6)

Prerequisite: International law and/or organization. Study and discussion of such contemporary problems as: individual responsibility under international law; control of outer space; changing concepts of the territorial seas; relationship of international law and international organization. Individual research projects.

33.640 International Organization (3)

A study of the organizational system of the international community; processes and institutionalized forms of international order.

33.651 United Nations Organization and Functions (3)

The Charter, origins, functions, operation of the principal organs with emphasis upon the General Assembly and the Security Council. Admission of members, obligations of membership.

33.652 United Nations Economic and Social Operations (3)

A broad understanding of both the theoretical and practical aspects of the economic and social functions of the United Nations system, including the specialized agencies. Attention will be given to the political as well as economic and social forces that have shaped the system, the general pattern of activity in major substantive areas, including economic development, trade and social measures, problems concerning both national and international decision-making processes, and the likely future development of these programs.

33.654 Seminar: Organization of American States (3)

Organization and operation of the Organization of American States and affiliated organization. Inter-American security and peace system. Relationship of the system to the United Nations.

75.658 Seminar on Regional Organizations: Western Europe (3)

Prerequisite: Introduction to Economics or International Economics, Modern European History. A survey of the factors responsible for the trend toward European organization and integration, and an examination of the more important institutions of the European community: ECSA, EEC, WEU, Euratom, etc.

33.675 Seminar on the United Nations (3-6)

Selected problems on the United Nations and specialized agencies.

33.750 Seminar in International Organization (3)

The nature of organization and administration at the international level, with special reference to existing international agencies. Individual research and written reports.

33.770 Seminar on International Law (3)

Prerequisite: 6 hours in international law and/or organization. Selected problems in international law including international, constitutional, administrative, and criminal law and international legislation.

Diplomacy and Foreign Policy Formation

33.563 Problem Papers in American Diplomacy (3)

Role playing course in American Diplomacy (adjustable to meet needs of foreign students). Each student is assigned the role of a desk officer for a country or group of countries or for an international organization or agency. The work consists of the preparation of typical State Department (Foreign Office) and foreign service documents, including briefing papers, position papers, political and economic reports, speech drafts, press statements, public affairs guidance, group reports, and national policy papers.

33.630 American Foreign Policy (3)

The development of the diplomatic process including the role of the President and Department of State in foreign affairs. Significance of international institutions in American diplomacy.

75.652 Seminar on National Security Policy (6)

A broad examination of the principal elements of national security policy. The world setting. Roles of Executive Branch and Congress in policy making, implementation and control. Civilian-military equation, military doctrine, strategic intelligence. Principal elements of military strategy. Operative economic factors and forces.

33.655 The United States and International Organization (3)

The political science of U.S. participation in international organization. Background and consequences of expanded U.S. participation. Executive and Congressional roles in development and execution of U.S. international organization policies and activities. Examination of selected problem areas such as financing, international administration, economic and social development, politico-military action. Prospects and problems of development.

33.670-671 Seminar: Comparative Foreign Policy Formation I, II (3, 3)

The instruments and process of decision making in foreign policy of selected nations approached comparatively.

75.673 Seminar: Foreign Policy Formation in the United States (3)

Prerequisite: A course in American Government. The conduct and control of foreign policy, with special emphasis on administrative and policy problems of the United States and selected foreign countries due to the impact of foreign policy in the domestic and international field; on State Department organization and its relation to other departments. Congress, the President and public opinion. Members may select key problems showing the making and control in relation to strategic, military, fiscal and economic practice.

33.679 Seminar and Workshop in Intelligence Research and Analysis (6)

Contemporary International Relations

33.616 International Relations Between the Wars (3)

Diplomacy of 1919-1939 with particular reference to Europe. Development and breakdown of the French system; collective security, Fascism and Nazism, the Soviet Union, the role of the U.S. in European affairs.

33.617 Diplomacy of World War II (3)

History of the diplomatic front during the War. Groundwork of the postwar settlement.

33.672 Seminar in Unconventional Warfare (3)

An examination of modern unconventional war; its impact on the underdeveloped nations and on the conduct of United States foreign policy; political and ethical considerations.

75.610 Contemporary Ideological Issues (3)

75.620 Seminar on World Communism (3)

Prerequisites: Modern history, Marxist theory and permission of instructor.

A survey of the development of the socialist and communist movements, their background, organization, doctrine and major strategic concepts; general communist strategy toward the advanced industrial and underdeveloped areas.

75.631 The Dynamics of Revolution (3)

The background and causes of revolution, and the assessment and prediction of revolutionary threat or potential. The types and stages of revolution, and the techniques of revolutionary action. The planning, organization, and conduct of revolution as a conflict instrument. The prevention and suppression of revolution.

33.673 Seminar in Unconventional Warfare (3)

33.700 Seminar in Contemporary International Relations (3)

Individual projects, group discussion and analysis of special problems; selected topics such as problems raised by nuclear warfare, political and military aspects of arms control, and the role of the military in developing nations may be examined as the focus of the semester's work. May be taken twice for credit.

International Political Communication

75.633 Psychological and Cultural Bases of International Politics (3)

Phenomena and problems of international politics in terms of underlying psychological and cultural forces: theory of international politics from behavioral-science points of view.

75.638 Information and Persuasion in Cross-Cultural Contacts (3)

Prerequisite: Foundations of International Communications and permission. A comparative examination of the theory and practice of effective international communication techniques as applied by government and non-government organizations and individuals.

75.639 Foundations of International Communication (3)

The conceptions, problems, and techniques of international communication in terms of individual and group behavior as represented in social psychology and allied disciplines.

75.650 International Political Communication (3)

Psychological aspects of foreign policy and role of communication. Problems presented by use of propaganda media of international communication in the service of national policy.

75.675 Political Communication and Foreign Policy: Systems of Support (3)

The course analyzes cultural, economic, and technical programs that governments use to create a favorable background for foreign policy aims. Conducted along workshop lines, one of the course objectives is to publish papers based on individual and group research.

International Labor

33.641-642 World Labor and Contemporary International Relations I, II (3, 3)

Evaluation of the influence of labor's new political and economic status on world affairs. Comparative labor ideologies and other labor issues in key areas of the world affecting international relations.

75.672 History of the International Labor Movement (3)

Development of international labor movement from mid-19th century to the

present; origins, ideologies, aims, impact on world events, and structure of Socialist, Christian, Anarchist, Democratic, and Communist internationals.

75.676 Social and Labor Problems of Underdeveloped Areas (3)

Role of labor in new countries and dependent areas, labor's political orientation, contributions to the formation of new nations, relationship to new governments and attitudes toward new social and economic objectives; problems in recruiting leaderships and in applying trade unionism; labor's impact on the pattern and pace of industrialization.

33.677 Seminar in International Labor Relations (3-6)

Selected ideological, political, economic, and administrative problems in international labor relations. Special individual projects in key current issues.

American Civilization

33.543-544 World Human Needs I, II (3, 3)

33.604 Seminar: The Civilization of the United States (3)

A study, with papers and reports on significant 20th century writings, of major aspects of American Civilization.

33.605 Seminar: Interpreting American Civilization Abroad (3)

Readings in foreign images of the United States. Research papers on topics selected from American civilization in which non-Americans have evidenced other particular interest.

Area Studies

The introductory courses comprise surveys of the history, government, geography, culture, institutions and foreign relations of the area. The integrated area seminars, which may carry up to 6 hours credit each semester with varying emphasis as appropriate, treat organically (a) the geography, demography, and ecology of the area, (b) social structure, (c) historical roots, (d) religion, (e) culture, (f) economy, (g) government and politics, (h) contemporary international politics, and (i) one or more studies of particular countries within the area. Opportunity is given in outside reading and research projects for the individual student to differentiate according to his own needs and interests, either on a subject matter basis or on a country basis.

Students taking the integrated area seminars may not obtain academic credit for overlapping courses in special aspects; if such courses have been taken, the integrated area seminar will carry correspondingly less credit. Full inquiry should be made prior to or at the time of registration.

All "700 level" area seminars ordinarily require as prerequisites either the relevant integrated area seminar or nine to twelve hours of course or seminar work in the field of the area. They may be taken twice for credit.

Students who are interested in area studies are urged to explore the offerings of other divisions of the University, such as the School of Government and Public Administration and Departments of Anthropology, Economics, English, History, and Sociology of the College of Arts and Sciences, for specialized courses in each of the geographical areas.

AFRICA

33.624 Problems of Contemporary Africa (3)

- 33.645 Labor in an Area: Africa South of the Sahara (3)
- 33.697-698 Seminar in Africa (6, 6)
- 33.785 Seminar on Africa (3)

FAR EAST

- 33.560 Cultural Factors in East-West Relations (3)
- 33.628 The Far East in World Affairs (3)
- 33.688-689 Seminar in the Far East (6, 6)
- 33.664 Ideological Aspects of Chinese Communism (3)
- 33.715 Seminar: Role of the Military in Modern China (3)
- 33.781 Seminar on China (3)
- 33.782 Seminar on Japan (3)
- 33.787 Seminar on Sino-Soviet Relations (3)

LATIN AMERICA

- 75.553 Colloquium on Latin America (3)
- 33.629 International Relations of Latin America (3)
- 33.645 Labor in an Area: Latin America (3)
- 33.684-685 Seminar in Latin America (6, 6)
- 33.653 Agrarian Problems: Latin America (3)
- 33.784 Seminar on Latin America (3)

MIDDLE EAST AND NORTH AFRICA

- 33.625 International Relations of the Middle East (3)
- 33.680-681 Seminar in Middle East (6, 6)
- 33.669 Nationalism in the Middle East (3)
- 33.786 Seminar on the Middle East (3)

SOUTH AND SOUTHEAST ASIA

- 33.626 South Asia in World Politics (3)
- 33.627 International Relations of Southeast Asia (3)
- 33.645 Labor in an Area: South and East Asia (3)
- 33.686 Seminar in South and Southeast Asia (3)
- 33.653 Agrarian Problems: East and South Asia (3)
- 33.778 Seminar: Communist Political Warfare in Southeast Asia (3)
- 33.788 Seminar on South and Southeast Asia (3)

SOVIET UNION AND EASTERN EUROPE

- 75.543 Colloquium on the Soviet Union (3)
- 33.622 Soviet Russia in World Affairs (3)
- 33.632 International Relations of Eastern Europe (3)
- 33.682-683 Seminar in Soviet Union (6, 6)
- 33.721 Seminar in Soviet Foreign Policy (3)
- 33.783 Seminar on the Soviet Union (3)
- 33.787 Seminar in Sino-Soviet Relations (3)
- 33.789 Seminar on Eastern Europe (3)

WESTERN EUROPE

- 75.523 Colloquium on France in World Affairs (3)
33.620 International Relations of Western Europe (3)
33.645 Labor in an Area: Western Europe (3)
33.693 Western Europe: Common Elements (6)
33.694 Western Europe: Germany as lead country (6)
33.695 Western Europe: Great Britain as lead country (6)
33.696 Western Europe: France as lead country (6)

THESIS AND DISSERTATION SEMINARS

- 33.797 Master's Thesis Seminar (3-6)
33.799 Doctoral Dissertation Seminar (3-6)

FACULTY

Full-Time

Dean FREDERICK J. PIOTROW, B.A., Haverford College; B.A., M.A., D.Phil., Oxford. Associate Professor of International Relations.

University Professors HAROLD E. DAVIS, B.A., Hiram; M.A., Chicago; Ph.D., Western Reserve. University Professor.

WILLIAM Y. ELLIOTT, B.A., M.A., Vanderbilt; Ph.D., Yale. University Professor.

RALPH H. GABRIEL, B.A., M.A., Ph.D., Yale. University Professor, Emeritus.

ERNEST S. GRIFFITH, A.B., Hamilton; D.Phil., Oxford. University Professor, Emeritus.

Professors MARY E. BRADSHAW, B.A., Pennsylvania College; M.A., Ph.D., Wisconsin. Professor of International Relations.

RICHARD BUTWELL, B.A., Tufts; M.A., Indiana; D. Phil., Oxford. Professor of South and Southeast Asian Studies; Director, BCIU Training Program.

W. WENDALL CLELAND, B.A., Westminster; M.A., Princeton; Ph.D., Columbia. Professor Middle East Studies, Emeritus.

CHARLES H. HEIMSATH, B.A., Yale; M.I.A., Columbia; Ph.D., Yale. Professor of South Asian Studies.

LOY W. HENDERSON, A.B., LL.D., Northwestern; D. Public Service, Denver. Professor of International Relations.

MARIAN D. IRISH, A.B., Barnard; M.A., Bryn Mawr; Ph.D., Yale. Charles O. Lerche Professor of International Relations.

WHITTLE JOHNSTON, B.A., Swarthmore; Ph.D., Harvard. Professor of American Studies and International Relations.

PHILIP M. KAISER, B.A., Wisconsin; B.A., M.A., Oxford; Professor of International Labor Relations (On leave).

KENNETH P. LANDON, B.A., Wheaton; Th.B., Princeton; M.A., Ph.D., Chicago. Professor of Southeast Asian Studies; Director, Center for South and Southeast Asian Studies.

MICHAEL LINDSAY (Lord Lindsay of Birker), B.A., M.A., Oxford. Professor of Far East Studies.

ALBERT D. MOTT, B.A., M.A., Missouri; Ph.D., California. Professor of West European Studies.

OLIVER A. PETERSON, B.A., North Dakota. Visiting Professor of International Labor Relations.

PITMAN B. POTTER, B.A., M.A., Ph.D., Harvard. Professor of International Relations, Emeritus.

RALPH L. POWELL, B.A., California; Certif., California College in China; Ph.D., Harvard. Professor of Far East Studies. (On leave, Spring 1969)

DARRELL D. RANDALL, B.A., Nebraska Wesleyan; M.A., Nebraska, Columbia; Ph.D., Chicago. Professor of African Studies. (On leave, Spring 1969)

HAROLD M. RANDALL, B.A., Parsons; M.A., Ph.D., Georgetown. Professor of Latin American Studies. (On leave, 1968-69.)

ABDUL AZIZ SAID, B.S.S.S., M.A., Ph.D., American. Professor of International Relations; Director, Institute on the United States in World Affairs.

DURWARD V. SANDIFER, B.A., Eureka; M.S., LL.B., Ph.D., Columbia. Professor of International Relations.

SAMUEL L. SHARP, LL.M., J.S., Warsaw. Professor of International Relations.

ABSOLOM VILAKAZI, B.A., Natal; M.A., Hartford Seminary; M.A., Trinity; Ph.D., Natal. Professor of Anthropology and African Studies.

LAWRENCE W. WADSWORTH, JR., B.S., Centenary; M.A., Tulane; Ph.D., American. Grazier Professor of International Law.

MILLIDGE P. WALKER, A.B., Williams; M.A., Ph.D., California. Professor of Southeast Asian Studies; Associate Dean.

TAKEHIKO YOSHIHASHI, B.A., California; M.A., Harvard; Ph.D., Yale. Professor of International Relations.

Associate Professors THEODORE A. COULOMBIS, B.A., Connecticut; M.A., Georgetown, Connecticut; Ph.D., American. Associate Professor of International Relations.

JOHN J. FINAN, B.A., M.A., Washington; Ph.D., Harvard. Associate Professor of Latin American Studies. (On leave 1968-69.)

ELKE FRANK, B.A., M.A., Florida State; Ph.D., Harvard. Associate Professor of International Relations.

GEORGE L. HARRIS, B.A., Washington; Ph.D., Catholic. Associate Professor of Far East Studies.

CHARLES C. MCLAUGHLIN, B.A., Yale; M.A., Ph.D., Harvard. Associate Professor of American Studies.

HAMID MOWLANA, B.A., M.A., Ph.D., Northwestern. Associate Professor of International Communications.

ELSPETH D. ROSTOW, B.A., Barnard; M.A., Radcliffe. Associate Professor of American Studies.

ALAN R. TAYLOR, B.A., Columbia; M.S., Ph.D., Georgetown. Associate Professor of International Relations.

BRADY B. TYSON, B.A., Rice; B.D., Southern Methodist; Ph.D., American. Visiting Associate Professor of Latin American Studies.

LARMAN C. WILSON, B.A., Nebraska State; M.A., Ph.D., Maryland. Associate Professor of International Relations.

Assistant Professors WILLIAM C. CROMWELL, B.A., Emory; M.A., Ph.D., American. Assistant Professor of International Relations.

JAMES R. JOSE, B.A., Mount Union; M.I.S., Ph.D., American. Assistant Professor of International Relations.

HERMAN J. RUETHER, B.A., M.A., Xavier; Ph.D., Claremont. Assistant Professor of South and Southeast Asian Studies.

Instructors GEOFFREY L. BURKHART, B.A., Oakland. Instructor in South and Southeast Asian Studies.

PAUL O. JOHNSON, A.B., Bowdoin; M.A., Yale. Instructor in American Studies; Assistant Dean.

LINDA L. LUBRANO, B.A., Hunter; M.A., Indiana. Instructor in International Relations.

GARY R. WEAVER, B.A., M.A., American. Instructor in International Relations; Assistant Dean and Director of Professional Programs.

Part-Time

Adjunct Professors ROLLIN S. ATWOOD, B.S., Chicago; M.A., Ph.D., Clark. Adjunct Professor of Latin American Studies.

WILLIAM BADER, B.A., Pomona; M.A., Ph.D., Princeton. Adjunct Professor of International Relations.

F. GUNTHER EYCK, B.A., Alma College; M.A., Ph.D., New York University; M.S., Columbia. Adjunct Professor of International Relations.

LORNA HAHN, B.A., Temple; M.A., Ph.D., University of Pennsylvania. Adjunct Professor of International Relations.

LEON HERMAN, B.A., Long Island University; M.A., California. Adjunct Professor of Soviet Studies.

HARRY N. HOWARD, B.A., William Jewell College; M.A., Missouri; Ph.D., California. Adjunct Professor of Middle East Studies.

ERNEST W. LEFEVER, B.A., Elizabethtown; B.D., Ph.D., Yale. Adjunct Professor of International Relations.

WILLIAM A. LYBRAND, A.B., Muhlenberg College; M.S., Ph.D., Maryland. Adjunct Professor of International Relations.

BELA C. MADAY, Ph.D., Pazmany University. Adjunct Professor of East European Studies.

LYDIA S. NA RANONG, B.A., Ecole Libre des Sciences Politiques; M.A., Radcliffe; Ph.D., Harvard. Adjunct Professor of South and Southeast Asian Studies.

CARLTON SAVAGE, B.S., Oregon; M.A., George Washington. Adjunct Professor of International Relations.

JAMES W. SPAIN, M.A., Chicago; Ph.D., Columbia. Adjunct Professor of South and Southeast Asian Studies.

THOMAS P. THORNTON, A.B., Haverford; Ph.D., Johns Hopkins. Adjunct Professor of International Relations.

A. BUEL TROWBRIDGE, B.A., Cornell; Diploma, Oxford; M.A., Union Theological Seminary. Adjunct Professor of Soviet Studies.

ERIC WILLENZ, B.A., M.A., New School for Social Research, New York; Ph.D., Georgetown. Adjunct Professor in Soviet Studies.

Professorial Lecturers JOHN T. BENNETT, B.A., Harvard; M.S., Ph.D., California. Professorial Lecturer.

EARL BRILL, A.B., University of Pennsylvania; Th.B., Philadelphia Divinity School; Th.M., Princeton Theological Seminary. Professorial Lecturer in American Studies; Episcopal Chaplain.

JAMES E. CROSS, B.A., Yale; LL.B., Virginia. Professorial Lecturer in National Security Policy.

JAMES SIMSARIAN, A.B., California; M.A., LL.B., Ph.D., Columbia. Professorial Lecturer.

JAMES H. SPINGARN, A.B., Dartmouth; LL.B., Columbia. Professorial Lecturer in International Relations.

Lecturers NORDA CARLSON, B.A., Middlebury; M.A., American. Lecturer in International Relations.

JOHN H. SULLIVAN, B.A., M.A., Marquette. Lecturer in International Relations.



THE COLLEGE OF CONTINUING EDUCATION

History The education of the adult part-time student has been a major concern of The American University throughout its history. Founded as a university devoted to graduate education, the University began its instructional program by offering work leading to advanced degrees in selected disciplines to persons engaged in career professions.

From these beginnings the University developed the School of Social Sciences and Public Affairs at its downtown Center. The SSPA was devoted to teaching and applying knowledge in the social sciences and related disciplines to the uses of government and society. In these areas it was concerned with both advanced and undergraduate study and its clientele was primarily the employed community of Washington.

As the University gradually developed its undergraduate degree program, this original tradition was perpetuated through the establishment of a Division of General and Special Studies, the purpose of which was to maintain the contact with the adult student and to continue to make the facilities of the University available to him.

Through the years adult education has become a big business, placing increasing and more complex demands upon the universities. In an effort to help meet this need, the Division of General and Special Studies was made a College of Continuing Education in October 1964.

Since that date, the College of Continuing Education has added two graduate degrees, two undergraduate degrees, two associate degrees, five graduate certificates and three undergraduate certificates.

Philosophy As indicated by its name, the College of Continuing Education is dedicated to the continuing collegiate education of adults. Its primary purpose is the utilization of the intellectual resources of The American University in the service of the part-time student. The majority of students in this college are those whose major activity is something other than the pursuit of education. It is to the specialized needs of these students that the programs of the College of Continuing Education have been geared.

UNDERGRADUATE DEGREES

Associate in General Studies

Social Science Option (60 Semester Hours)

- I. University Requirements (42 hours) (see page 29)
- II. Major Requirements (18 hours)

Six hours each in three of the following areas: Anthropology, economics, history, sociology, psychology, government, international relations, and Technology of Management.

Business Administration (60 Semester Hours)

- Option
- I. University Requirements (42 hours) (see page 29)

As part of the University requirements students enrolled in this option must include 19.100 and 19.101 Introduction to Economics I and II.

- II. Major Requirements (18 hours)
 - 10.306 and 10.307 Introductory Accounting I and II (6 hours)
 - 10.201 Business Law I (3 hours)
 - Mathematics or Statistics (3 hours)
 - Business Electives (6 hours)

Bachelor of Science in General Studies

The Bachelor of Science in General Studies is designed for undergraduate part-time students over the age of twenty-one. For the convenience of the adult the course program has considerable flexibility, enabling the student to select one of two major areas of concentration, social science or business administration. In most cases requirements for the degree have been structured in such a way that degree completion can be virtually assured through evening classes.

Social Science Option (120 semester hours)

- I. University Requirements (42 hours) (see page 29)
- II. Area of Concentration (42 semester hours)

Six semester hours each in three of the following fields plus a minimum of twelve semester hours of upper level course work in one social science. Anthropology, Technology of Management, Economics, Government, History, International Relations, Psychology, and Sociology.

- III. Electives (36 semester hours)

Business Administration (120 semester hours)

- Option
- I. University Requirements (42 hours) (see page 29)

As part of the University requirements, students enrolled in this option must include 19.100 and 19.101 Introduction to Economics I and II (6 hours); and six hours of Mathematics (Survey or Fundamentals)

- II. Area of Concentration (48 semester hours required)
 - 10.306 Introductory Accounting I (3)
 - 10.307 Introductory Accounting II (3)
 - 10.201 Business Law I (3)
 - 10.302 Business Law II (3)
 - 10.465 Finance I (3)
 - 10.481 Principles of Production (3)
 - 10.491 Personnel and Manpower Management (3)
 - 10.556 Business Budgeting and Executive Control (3)
 - 11.300 Marketing I (3)
 - 55.310 Introduction to Data Processing
 - 55.333 Computer Programming I
 - 55.334 Computer Programming II
 - 55.511 The Systems Approach
 - 55.530 Automatic Data Processing Systems
 - 69.202 Basic Statistics
 - 69.300 Business Statistics
- III. Electives (30 semester hours)

Associate in Law Enforcement

(60 semester hours)

- I. University Requirements (42 hours) (see page 29)

As part of the University requirements, students enrolled in this program must take 53.150 The U.S. Political System I, 57.200 General Psychology, and 65.200 Introductory to Sociology.
- II. Major Requirements (18 hours)
 - 54.110 Introduction to Law Enforcement (3)
 - 54.210 Police Administration I (3)
 - 54.320 Police Investigation (3)
 - 54.340 Criminal Law I (3)
 - 54.341 Criminal Law II (3)
 - 67.110 Public Speaking (3)

Bachelor of Science in Law Enforcement

(120 semester hours)

Philosophy The College of Continuing Education in cooperation with the School of Government and Public Administration offers the degree of Bachelor of Science in Law Enforcement. The courses in this degree program provide the student with a general liberal arts background as well as strong specialization in professional courses. They are designed to prepare him for a career in one of the public or private services associated with the administration of criminal justice. This program has been developed in cooperation with a group of the Washington Metropolitan area law enforcement agencies.

At present, the Washington, D. C. Metropolitan Police, the White House Police, the U. S. Park Police, Montgomery County Police, and the police departments of Arlington, Alexandria, and Fairfax, Virginia are active participants in the program. It is open to all law enforcement per-

sonnel, including members of the armed service police. An advisory board made up of representatives of the local law enforcement agencies and the International Association of Chiefs of Police gives the program direction and guidance.

The program at The American University is considered unique in that it is directed primarily to in-service personnel and is treated by many of the metropolitan area police agencies as an integral part of their training program. The curriculum is designed to combine the best of both the academic and professional police communities. To accommodate personnel on shift work, all police courses are offered on location at the respective departmental headquarters and each lecture is given twice—once in the morning and once in the evening. Students may attend either lecture.

Although the off-campus location of the police courses will generally require the full-time student to have private transportation and to take a few evening courses, it is felt that the advantage of taking classes with professional personnel far outweigh the inconvenience incurred by the need to commute. It should be emphasized, however, that the full-time student can complete all but the law enforcement courses (27 semester hours) on the campus.

Admission Requirements **PART-TIME STUDENTS OVER 21 YEARS OF AGE**—This category includes full time law enforcement personnel and other adults (over 21) who are interested in part-time education in the areas of criminal justice. These personnel are considered for admission in accordance with the non-degree policy as set forth on page 36 of this Catalog.

FULL-TIME STUDENTS—This category includes both high school graduates and transfer students who wish to complete either the Associate or Bachelor's curriculum in law enforcement. Individuals desiring consideration for admission to full-time study in either of these programs must also meet the other requirements of admission to The American University as set forth on page 36 of this Catalog.

**Bachelor of Science
in Law Enforcement
Curriculum**

I. University Requirements (42 hours) (see page 29)
As part of the University requirements, students must take 53.150 The U. S. Political System I, 57.200 General Psychology, 65.200 Introduction to Sociology.

II. Areas of Concentration (57 hours)

A. Law Enforcement (27 hours)

- 54.110 Introduction to Law Enforcement (3)
- 54.210 & 54.310 Police Administration I & II (6)
- 54.320 Police Investigation (3)
- 54.330 Traffic Planning, Regulation & Control (3)
- 54.340 & 54.341 Criminal Law I & II (6)
- 54.350 Criminalistics (3)
- 54.440 Civil Rights and Civil Liberties in Law Enforcement (3)

B. Political Science (9 hours)

- 53.250 The U. S. Political System II (3)
- 53.350 U. S. Constitutional Law I (3)

C. Related Courses (21 hours selected from the following)

- 54.212 Corrections Administration (3)

- 54.321 Accident Investigation (3)
- 54.410 Special Problems (3) (May be repeated for credit)
- 54.450 Problems in Criminalistics (3)
- 57.401 Psychology of the Adolescent (3)
- 57.410 Psychology for Law Enforcement Officers (3)
- 65.361 Social Disorganization (3)
- 65.415 Law and the Social Order (3)
- 65.416 Introduction to Criminology (3)
- 65.563 Causes of Crime (3)
- 65.568 Treatment of the Offender I (3)
- 65.569 Treatment of the Offender II (3)
- 67.110 Public Speaking (3)

III. Electives (21 hours)

COURSE DESCRIPTIONS: LAW ENFORCEMENT CURRICULUM

54.100 Backgrounds of Police Work (3)

A basic review of the principles of law enforcement. (Open only to members of area recruit schools).

54.110 Introduction to Law Enforcement (3)

An introduction to the historical, philosophical and constitutional aspects of criminal justice. Emphasis will be on the western world, primarily contemporary U. S.

54.210 Police Administration I (3)

An analysis of the basic principles of administration and management as applied to the police function. Emphasis on police organization and management, the staff function and the police role. *Prerequisite:* 54.110.

54.211 Fire Administration (3)

An analysis of the basic principles of administration and management as applied to the fire function. Emphasis on organization and the fire role.

54.212 Corrections Administration (3)

An introductory course in the field of corrections. Emphasis on the basic principles of administration as applied to the corrections function and the role of corrections in the administration of criminal justice.

54.310 Police Administration II (3)

An analysis of police line operations including patrol, investigation, traffic, juvenile, and special operations.

Prerequisite: 54.110

54.320 Police Investigation (3)

Principles, methods, procedures in the investigation of crimes; recognition, evaluation, preservation of evidence; search, observation, surveillance and interrogation.

54.321 Accident Investigation (3)

Principles, methods procedures in the investigation of accidents; recording, use of data.

54.330 Traffic Planning, Regulation, and Control (3)

Organization for traffic regulation; traffic problems and trends; traffic laws; traffic surveys; handling of special events, other traffic problems; training police for traffic control.

54.340 Criminal Law I: Procedural (3)

An analysis of the procedural aspects of criminal law including jurisdiction, extradition, statute of limitations, jeopardy, *ex post facto* laws, law of arrest, indictment, information rights of the accused (counsel, privilege against

self-incrimination, privacy, jury, etc.), evidence, steps taken by the prosecutor prior to and after indictment, and steps taken by defendant.

54.341 Criminal Law II: Substantive (3)

An analysis of substantive criminal law including offenses against person, habitation, property; the doctrine of imputability, the doctrine of *Mens Rea*, responsibility dealing with infancy, insanity, intoxication, mistake, consent and condonation; and special defenses such as public authority, self-defense, entrapment and defense of property. (Appropriate statutes will be used that coincide with jurisdiction of officers attending the course. In cases of mixed jurisdiction both statutory and common law sources may be used.)

54.350 Criminalistics (3)

Scientific analysis and identification of evidence; identification of documents; special police techniques; interpretation of medical reports; preparation of reports.

54.410 Special Problems: (3)

Selected problems in the area of police administration, investigation and criminal law. Course may be repeated for credit. Each offering will have a subtitle.

Prerequisites: 54.310, 54.320, 54.340 and Junior/Senior standing.

54.440 Civil Rights and Civil Liberties in Law Enforcement (3)

The nature of civil liberties and civil/political rights in the U.S. Emphasis on judicial exposition and its relationship to the field of law enforcement.
Prerequisite: 53.150.

54.540 Problems in Criminalistics (3)

A detailed examination of specific problem areas involving case studies and investigative techniques, practices and procedures with emphasis on scientific application thereto.

Prerequisite: 54.350.

57.410 Psychology for Law Enforcement Officers (3)

Psychological processes in criminal law enforcement behavior, with special attention to motivation.

Prerequisite: 57.200.

NOTE: Other courses in the fields of government, psychology, and sociology are listed under those respective departments.

GRADUATE DEGREES

Master of Science in Teaching

The Master of Science in Teaching is a professional degree designed to equip qualified candidates who are interested in the field of teaching. It is planned for full or part-time students who already have a bachelor's degree in a field of concentration other than education, and who are seeking a career or second career in teaching. In most cases the Graduate Record Examinations are not required for admission to the program.

In addition to the prerequisite courses or their equivalents, the program consists of a minimum of thirty graduate credit hours of professional training for teaching at the secondary level. A minimum of twelve graduate hours will usually be taken in the subject matter area in which the candidate desires to teach. The remainder of the credits will be taken in education as outlined under the curriculum which follows. Since candidates are required to take six credits in a graduate research seminar, no thesis is required. To complete the degree each

student must pass two comprehensive examinations, one in the subject matter area and one in a core field of education.

The Master of Science in Teaching degree presently offers the following areas as disciplines: Data Processing, English, Foreign Language, Mathematics, Sciences, and United States History.

- I. Prerequisites
 - A. Psychology of Education
 - B. Methods of Teaching in Secondary Schools
 - C. Basic Statistics
- II. Foundations of Education (6 hours)
 - A. Historical and Philosophical basis for education (To be satisfied by one course in history of education and one course in philosophy of education).
 - 21.512 History of Education in the United States (3)
 - or
 - 21.511 History of Education in Western Culture (3)
 - 21.510 Philosophy of Education (3)
 - or
 - B. Psychological and Developmental Aspects of Classroom Teaching. (To be satisfied by the following courses.)
 - 21.520 Advanced Psychology of Education
 - 21.521 Mental Health Aspects of Education
- III. Evaluation and Measurement in Education (3)
 - 21.522 Evaluation of Student Progress (3)
 - (Prerequisite: 69.202 Basic Statistics or equivalent)
- IV. Graduate Research Seminar (6 hours)
 - 21.790 Research Seminar in Education I (3)
 - 21.791 Research Seminar in Education II (3)
- V. Practicum Area (6 hours)

To be satisfied by 21.691 In-Service Training: Internship in Education. (Prerequisite: one course in methods of teaching in secondary schools.) At least 6 weeks (or the equivalent) of student teaching with a supervising teacher at the secondary level. Arrangements may be made to complete this requirement in evening high schools throughout the Washington Metropolitan area.
- VI. Subject Matter Area (12 hours)

The student must select a minimum of 12 credits in a major academic area at the advanced level. A list of course offerings for each of the discipline areas is available upon request.

Master of Science in Correctional Administration

The Master of Science in Correctional Administration is a professional degree designed to equip qualified candidates interested in various career areas of corrections for positions of leadership in this field. It is planned especially for those actually engaged in correctional work but is open to all qualified college graduates.

The MSCA program consists of a minimum of 35 credit hours of

graduate work. Graduate courses include 14 credit hours in correctional administration plus 12 credit hours in the chosen field of government or sociology or 15 credit hours in counseling, plus 9 credit hours of supplementary courses. In addition, the candidate must pass two comprehensive examinations covering (1) the field of correctional administration, and (2) the field of either government, sociology, or counseling.

Since candidates are required to complete both an in-service training project and a graduate research project, no thesis is required. These two courses must be completed with a grade of at least "B".

I. Core Curriculum in Correctional Administration (14 hours)

- 31.555 Institute of Correctional Administration (8)
 - Clinical Criminology I—Case Studies
 - Clinical Criminology II—Field Inspection Trips
 - Probation and Parole Seminars with correctional leaders
 - Counseling and Guidance of Offenders
- 56.691 In-Service Training Project (3)
 - Internship in a correctional agency for a minimum of 12 weeks under the joint supervision of University and agency officials.
- 56.690 Graduate Research Project (3)
 - A field study-operational project and report on a problem approved by the University.

II. Minor Comprehensive Courses (A, B, or C)

A. Government (12 credit hours)

- 54.643 Government Program and Budget (3)
- 53.650 Graduate Survey of American Government (3)
- 54.610 Modern Public Management I (3)
- 54.650 Principles of Public Personnel Administration (3)

B. Sociology (12 credit hours)

- 65.510 Concepts of Sociology (3)
- 65.540 Social Organization (3)
- 65.563 Causes of Crime (3)
- 65.569 Treatment of Offender II (3)

C. Counseling (15 credit hours)

- 21.551 Philosophy and Practices in Educational Guidance (3)
- 21.552 Analysis of the Individual for Purpose of Educational Counseling (3)
- 21.553 Techniques of Counseling in Education (3)
- 57.606 Psychological Measurements III (3) or
- 21.554 Vocational Analysis, Information and Placement (3)
- 21.645 Seminar: Psychological Evaluation (3)

III. Supplementary Courses (9 credit hours)

A. All candidates for the MSCA degree are required to take the following supplementary course:

- 53.671 The Judicial System and Process (3)

B. All candidates must also take six credit hours from the following course list:

- 53.650 Graduate Survey of American Government (3)
- 54.650 Principles of Public Personnel Administration (3)

- 65.563 Causes of Crime (3)
 - 65.569 Treatment of Offender II (3)
 - 21.551 Philosophy and Practices in Educational Guidance (3)
 - 21.553 Techniques in Counseling in Education (3)
 - 21.554 Vocational Analysis, Information and Placement (3)
- Choice of these supplemental courses will be decided by the Assistant Dean.

CERTIFICATE PROGRAMS

In recent years heavy demands have been placed upon the disciplines of business, data processing, and police administration. In the business field accounting has played an increasing role in all aspects of management for both government and industry. Changes in technology have led to a special emphasis on the fields of data processing and law enforcement. To assist in the training and professionalization of each of these areas, the College of Continuing Education has structured undergraduate and graduate certificate programs as outlined in the following.

Consideration for admission to the undergraduate certificate programs is limited to those holding at least a high school diploma. For those under twenty-one years of age not holding a Bachelor's degree, and admissions interview with a College of Continuing Education counselor is required. Consideration for admission to a graduate certificate program is limited to those holding a Bachelor's degree from an accredited institution.

Course requirements may be fulfilled either on-campus or at various off-campus centers in the Washington metropolitan area. Application blanks for any of the certificate programs may be found attached to brochures available from the College of Continuing Education.

Undergraduate Certificate Programs

Accounting Certificate The certificate program in Accounting has been flexibly designed to equip the student for a variety of careers in accounting. Major emphasis has been laid on courses which will assist the candidate in qualifying for most state CPA examinations. Students who successfully complete the program may also consider careers in managerial accounting with private industry, all levels of government, or non-profit organizations such as trade associations and hospitals.

Students possessing undergraduate degrees take the 27 required credit hours, as set out below, plus 9 credit hours of electives. Those students not possessing undergraduate degrees complete the same program as those with degree, but must also take 6 hours of English Composition and Reading (23.100 and 23.101) and 3 hours of Mathematics (41.100).

The certificate may be completed through 36 hours of course work for students already holding an undergraduate degree and 45 hours of course work for those not holding such a degree. Up to 15 hours of comparable previous work may be applied by transfer. Students may only transfer into the program grades of "C" or better. The student must maintain a "C" average to be awarded the certificate. In order to provide the most appropriate sequence of courses which relate di-

rectly to career goals, each student should obtain approval of his program from the office of the Director of Accounting Program.

- I. Required Courses (27 hours)
 - 10.201 Business Law I (3)
 - 10.306 Introductory Accounting I (3)
 - 10.307 Introductory Accounting II (3)
 - 10.314 Intermediate Accounting (3)
 - 10.315 Advanced Accounting (3)
 - 10.411 Cost Accounting (3)
 - 10.431 Fundamentals of Income Tax (3)
 - 10.514 Readings and Problems (3)
 - 19.100 Introduction to Economics (3)
- II. Electives (Choose 9 hours)
 - 10.302 Business Law II (3)
 - 10.421 Auditing (3)
 - 10.465 Business Finance I (3)
 - 10.512 Advanced Cost Accounting (3)
 - 10.532 Advanced Income Tax (3)
 - 19.101 Introduction to Economics II(3)

Data Processing Systems Students in the Data Processing certificate program may gear such a program to careers in the field of public administration of the field of business. The certificate may be completed through 30 hours of course work distributed as described under the curriculum provided below. Up to 12 hours of comparable previous course work may be applied by transfer. A minimum of 18 hours of this program must be taken in residence. Students may only transfer into the program grades of "C" or better. The student must maintain a "C" average to be awarded the certificate.

- I. Certificate Requirements: (27 hours)
 - 41.110 Fundamentals of Math I (3)
 - 69.202 Basic Statistics (3)
 - 10.306 Introductory Accounting I (3)
 - 10.307 Introductory Accounting II (3)
 - 55.310 Introduction to Data Processing (3)
 - 55.333 Computer Programming I (3)
 - 55.334 Computer Programming II (3)
 - 55.511 The Systems Approach (3)
 - 55.530 Automatic Data Processing Systems (3)
- II. Elective: (Choose 3 hours to complete 30 hour requirement)
 - 10.456 Principles of Management (3)
 - 10.491 Personnel and Manpower Management (3)
 - 54.510 Management of Institutional Records Systems (3)

Law Enforcement Certificate The Law Enforcement Certificate program has been developed in co-operation with a group of area law enforcement agencies. At present, the Washington, D.C. Metropolitan Police, the White House Police, the U.S. Park Police, Montgomery County Police, and the police departments of Arlington, Alexandria, and Fairfax, Virginia, are active participants in the program. The program is open to all law enforcement personnel, members of the armed service police, and other interested personnel. An Advisory Board made up of representatives of the local

law enforcement agencies and the International Association of Chiefs of Police gives the program direction and guidance.

Courses for this program are set forth below. Other courses may be substituted for certain of the above with special approval of the Assistant Dean of the College of Continuing Education. Up to 12 hours of comparable previous course work may be applied by transfer. A minimum of 18 hours of this program must be taken in residence. Students may only transfer grades of "C" or better into the program. The student must maintain a "C" average to be awarded the Certificate.

I. Required Courses (24 hours)

23.100 Composition and Reading I (3)

23.101 Composition and Reading II (3)

53.150 The U.S. Political System I (3)

54.110 Introduction to Law Enforcement (3)

54.210 Police Administration I (3)

or

54.310 Police Administration I (3)

54.340 Criminal Law I: Procedural (3)

65.200 Introduction to Sociology (3)

57.200 General Psychology (3)

II. Electives (6 hours) (to be determined by CCE Law Enforcement Adviser)

Graduate Certificate Programs in Technology of Management

The College of Continuing Education offers the following programs for Graduate Certificates in Technology of Management: Computer Systems, Operations Research, Scientific and Technical Information Systems, Research and Development Management, and Management Information Systems.

With the exception of certain foundation and prerequisite courses, the courses which constitute these certificate programs are taken from the regular Technology of Management curriculum offered by the Center for Technology and Administration. These certificate opportunities are offered as specialized preparation for careers in these fields for the students who do not want the broader and more demanding requirements of alternative graduate degree programs or who cannot meet the other scholastic requirements of graduate study. In certain conditions, which are defined below, certificate work may be applied toward a graduate degree objective, and graduate degree work may apply toward the award of a certificate.

These certificate programs are open to any student who has a bachelor's degree from an accredited undergraduate institution.

I. Graduate Certificate in Computer Systems

Prerequisite Courses (no graduate credit)

55.310 Introduction to Data Processing (3)

(Waived for the student who has had two years of job-related computer experience, such as programming, and instruction or substantial experience in non-computer data-handling systems.

- 55.411 Introduction to Management Mathematics (3) (or 41.110 & 41.111)
- 55.412 Computer Programming III (3) (or 55.333 & 55.334)
- 69.400 Managerial Statistics (3) (or 69.202 & 69.300)
- Advanced and Graduate Courses (15 hours required)
- 55.530 Automatic Data Processing Systems (3)
- 55.531 Computer Design (3)
- 55.561 Management of Automatic Data Processing Systems (3)
- 55.632 Advanced Computer Applications (3)
- 55.633 Evaluation of Software (3)
- II. Graduate Certificate in Operations Research
 - Prerequisite Courses (no graduate credit)
 - 55.411 Introduction to Management Mathematics (3) (or 41.110 & 41.111)
 - 41.222 Differential and Integral Calculus I (4)
 - 41.223 Differential and Integral Calculus II (4)
 - 69.400 Managerial Statistics (3) (or 69.202 & 69.300)
 - Advanced and Graduate Courses (15 or 18 hours required)
 - 55.511 The Systems Approach (3)
 - 55.540 Operations Research in Management (3)
 - 55.542 Probability and Statistics for Management Decisions (3)
 - 55.544 Advanced Management Mathematics (3) (required of students who have had equivalents of 41.222 and 41.223 more than ten years ago)
 - 55.641 Methods of Operations Research I (3)
 - 55.642 Methods of Operations Research II (3)
- III. Graduate Certificate in Scientific and Technical Information Systems
 - Prerequisite Course (no graduate credit)
 - 55.310 Introduction to Data Processing (3)
 - (Waived for the student who has had two years of job-related computer experience, such as programming, and instruction or substantial experience in non-computer data handling systems)
 - Advanced and Graduate Courses (18 hours required)
 - 55.530 Automatic Data Processing Systems (3)
 - 55.550 Survey of Information Science and Technology (3)
 - (formerly Types & Uses of Technical Information)
 - 55.651 Technical Information Machine Systems (3)
 - 55.653 Concepts of Indexing and Abstracting (3)
 - 55.654 Workshops in Technical Information Handling (3)
 - 55.656 Publication Techniques (3)
- IV. Graduate Certificate in Research and Development Management
 - Prerequisite Courses (no graduate credit)
 - 69.400 Managerial Statistics (3) (or 69.202 & 69.300)
 - 10.400 Use of Accounting Methods (3) (or 10.306 & 10.307)
 - 55.411 Introduction to Management Mathematics (3) (or 41.110 & 41.111) or
 - 10.457 Quantitative Methods in Decision Making (3) or
 - One course in business or governmental management, or substantial experience in management.

- Advanced and Graduate Courses (15 hours required)
- 55.570 Management of Research and Engineering Organizations and Laboratories (3)
 - 55.670 The Politics and Economics of Research and Development (3)
 - 55.671 Research and Development in the Total Organization (3)
 - 55.672 Scientific and Engineering Manpower (3)
 - 55.673 Planning and Control of Research and Development Operations (3)

V. Graduate Certificate in Management Information Systems

Prerequisite Courses (no graduate credit)

- 55.310 Introduction to Data Processing (3)
(Waived for the student who has had two years of computer-related job experience, such as programming, and substantial experience in non-computer data handling systems)
- 69.400 Managerial Statistics (3) (or 69.202 and 69.300)
- 10.400 Use of Accounting Methods (3) (or 10.306 and 10.307)
- 55.411 Introduction to Management Mathematics (3) (41.110 and 41.111) or
- 10.457 Quantitative Methods in Decision Making (3) or
One course in business or government management, or substantial experience in management.

Advanced and Graduate Courses (15 hours required)

- 55.511 The Systems Approach (3)
- 55.530 Automatic Data Processing Systems (3)
- 55.560 Systems Design for Business Operation (3)
- 55.561 Management of Automatic Data Processing Systems (3)
- 55.660 Management Information and Reporting Systems (3)

Graduate Certificate in Urban Affairs

The complexities of today's urban environment place great demands upon local government. In order to meet these demands, urban governments need trained specialists in a variety of fields. The College of Continuing Education in cooperation with the School of Government and Public Administration offers a Certificate program in Urban Affairs for the student who does not want the broader and more demanding requirements of alternate graduate degree programs or who cannot meet the scholastic requirements of graduate study. In certain conditions certificate work may apply toward a graduate degree objective. The requirements for the certificate program are outlined below.

Admission Consideration

Requirement An accredited Bachelor's degree is required.

Performance Requirement At least a "C" grade in all courses is required.

Prerequisites From 0-12 hours as follows:

- 53.650 Graduate Survey of American Government (3)
(or 6 hours of undergraduate American Government)
- 53.653 American Federalism (3)
(or 3 hours of undergraduate Urban Government or Federalism)

- 53.660 Political Dynamics (3) or 53.661 Political Behavior (3)
(or 3 hours of undergraduate Political Dynamics)
- 54.600 The Administrative State (3) or 54.610 Modern Public Management I (3) (or 3 hours of undergraduate Public Administration)

Advanced Graduate (15 hours required)

Course

- 53.680 The Urban Polity (3)
- 53.682 Urban Politics (3)
- 53.683 Urban Administration (3)
- 53.684 Urban Planning (3)

3 hours from other courses listed in the M.P.A. in Urban Affairs program.

NON-DEGREE

A student who does not plan to enroll in a program leading to a degree at The American University may apply for admission to courses of his choice for which he has the necessary background and special qualifications. Through its non-degree program, the College of Continuing Education meets the needs of those not desiring to pursue a formal degree. This program makes it possible for students to register for courses which may provide personal enrichment or additional background for professional purposes. These courses can be audited or taken for credit. Application for admission is a part of the registration procedure and need not be made in advance, except as explained below.

Non-degree students must meet the following entrance requirements. They must be over 21 or hold a Bachelor's degree from an accredited college or university. Students who have attended another institution within the preceding calendar year must be in good academic standing and entitled to honorable dismissal. Students who have ever been dismissed from another University should seek a personal interview with a CCE counselor to determine eligibility to enter.

A student enrolled in good standing in another college or university who wishes to earn credit to be transferred to his home institution may be admitted to The American University as a non-degree student. Such students must consult the Assistant Dean for campus programs, College of Continuing Education.

A non-degree student usually may not enroll in more than nine credit hours of course work (or more than six credit hours if his courses are at the 500 level or above) in any fall or spring session. A student who is permitted, because of special circumstances, to enroll in 12 credit hours a session will be carried on the rolls as a full-time non-degree student and must pay the tuition and other fees charged to full-time undergraduate degree students. Such registrations are subject to approval by the Assistant Dean for campus programs of the College of Continuing Education. Non-degree students are held to the same academic standards as degree students and are subject to dismissal at the end of any session in which their cumulative grade point average falls below "C" (1.00).

**Transfer From
Non-Degree
to Degree Status**

Students wishing to transfer from a non-degree status to a degree status at The American University should make application through the Office of Admissions. Those seeking to pursue an undergraduate degree may apply for admission to the fall session only. Application should be made after the student has finished twelve semester hours and before the student has completed thirty semester hours of work. Application for admission must be made two months before the session in which admission is desired. A maximum of thirty hours of non-degree credits may be transferred to an undergraduate degree program.

Students seeking entry to a graduate program from non-degree status may apply during any semester. A maximum of twelve credit hours of graduate level course work may be transferred from non-degree to degree status.

FOREIGN STUDENTS

All new foreign students must apply to the Foreign Student Admission Office and the foreign student adviser for admission to the University programs. Once admissions eligibility is determined by that office, these students are urged to consult a C.C.E. counselor in order to determine an appropriate academic program. Because of the general difficulty in obtaining foreign transcripts, foreign students are urged to apply well in advance of the semester in which they wish to enter.

Returning foreign students should report to the foreign student adviser to initiate their registration.

COUNSELING

The College of Continuing Education maintains through its day and evening programs academic advisory services, giving special attention to each student's individual needs.

Students are encouraged to seek academic counseling at any time during the semester. A full-time staff of counselors is readily available on the campus from 9:00 a.m. to 5:00 p.m. Monday through Friday. For the benefit of the evening student, limited counseling is offered from 5:00 to 8:30 p.m. Monday through Thursday.

Particular emphasis is given in the areas of determining academic load, assisting in course selection, and in determining the overall academic standing of the student.

Students are referred to other departments of the University as the need arises. Those considering graduate programs in other departments of the University are urged to consult these departments in advance of registration.

When appropriate, students are referred to the professional services of the University Counseling and Testing Center for assistance in choosing vocational and educational objectives, assessing educational strengths and skills, and for help with problems of personal and social adjustment.

OFF-CAMPUS STUDY

The College of Continuing Education arranges for course offerings at selected off-campus locations in the metropolitan Washington area.

Off-campus programs may include both graduate and undergraduate courses in all fields offered by the University and come under the same regulations and conditions as credit earned in courses meeting in University facilities on campus.

Although the scheduling of off-campus classes follows the general pattern of the University calendar and time schedule, it does not necessarily conform to the on-campus session dates in all details. The off-campus bulletin for each session should be consulted for further information.

ADMINISTRATION

<i>Dean</i>	RICHARD M. BRAY, B.A., M.A.
<i>Assistant Dean for Administration</i>	WILLIAM F. LANIER, B.A., M.A.
<i>Assistant Dean for Summer Sessions</i>	HERBERT P. STUTTS, B.A., M.A.
<i>Administrative Assistant</i>	EDGAR J. TOWNSEND, B.A., M.A.
<i>Resident Director, Fort Benning Branch</i>	JOHN B. EDGE, A.B., M.A.
<i>Coordinator of Police Programs</i>	CHARLES HERMANEK, A.B., M.A.
<i>Academic Counselor</i>	NORDA D. CARLSON, B.A., M.A.
<i>Research Specialist</i>	GENEVIEVE E. POOLE, B.A., M.A., L.H.D.
<i>Administrative Secretary</i>	MARY CATHARINE CALVERT

LUCY WEBB HAYES

SCHOOL OF NURSING

History While the University has long recognized the importance of nursing as a profession, it was the relocation of Sibley Hospital—for many years an established Methodist institution in Washington—on a site near the campus which led to a feasible and practical plan for the establishment of a baccalaureate program in nursing at The American University.

Establishment of this new school has been accelerated by close cooperation between the University and the Hospital, and through the interest and financial support of Methodist women's groups. Notable among these groups are the Woman's Society of Christian Service, both nationally and in the Baltimore Conference, and the Woman's Guild of Sibley Memorial Hospital.

The School of Nursing also has the support of the Baltimore Conference of the Methodist Church which is now conducting a campaign to raise half a million dollars toward its endowment.

The School of Nursing which admitted the first class in 1965, received reasonable assurance of accreditation from the National League for Nursing in 1966.

The School of Nursing is approved by the District of Columbia Nurses Examining Board.

Philosophy The comprehensive objective of The American University Lucy Webb Hayes School of Nursing is a dual one: education for the preparation of acceptance of (1) the obligations of citizenship in contemporary society; and (2) recognition of the responsibilities of nurses in the prevention of disease, the promotion of community and family health, and the care of patients in the hospital and home.

It is the belief of the school that such objectives can best be fulfilled by means of a general liberal arts education in combination with specialized curricular offerings. Hence the program is one which leads to the Bachelor of Arts.

SPECIFIC AIMS OF THE LUCY WEBB HAYES SCHOOL OF NURSING:

1. To provide students with knowledge of the major areas of learning, the natural sciences, the social sciences, and the humanities.
2. To assist students in the cultivation of skills and habits of reasoning which constitute intellectual competence, and the capacity to think logically and clearly.

3. To assist students to develop as responsible citizens, spiritually, socially, morally and professionally so that they may live intelligently and creatively in the complex contemporary world.
4. To inculcate in students the respect for learning and the need for the continuous search for knowledge; thus the recognition of the fact that undergraduate study is only the beginning of education.
5. To encourage creative abilities through emphasis upon philosophical theories and principles.
6. To prepare students for the responsibilities of the initial practice of professional nursing in any setting.
7. To prepare students for further study.

As the graduate of the basic baccalaureate program begins the practice of nursing, she is prepared:

- to administer care to the sick at the bedside.
- to apply the principles of disease prevention and health promotion which will enable the well person to remain well and prevent further disability among the ill and diseased.
- to analyze the needs of patients, establish plans for their care and assume responsibility for the execution of such plans.
- to improve the quality of patient care through critical appraisal of her practice, recommending appropriate revision as a result of evaluation.
- to work in collaboration with other members of the health professions for the purpose of the improvement of health care services to the individual and the community.
- to assume responsibility for continued professional growth.
- to pursue graduate study.

Facilities All campus facilities are available to students in the School of Nursing. In addition, Sibley Memorial Hospital, located approximately one mile from the University campus, will be the primary facility for clinical experience in the professional major. To supplement the Sibley Hospital relationship, arrangements are currently being made to utilize all possible clinical resources of the Washington community which will strengthen a clinical program designed to offer a most flexible and varied education to students in nursing.

Students in the School of Nursing assume responsibility for public transportation between the University and the various facilities used for laboratory and clinical courses. Only seniors are permitted to bring cars to campus; underclassmen will not be permitted parking permits. (See Motor Vehicles, page 21.)

Admission Requirements

Admission requirements are those established for undergraduates of the other academic programs of the University.

Students may apply for admission to the Fall semester only. Applications may be obtained by writing directly to the Office of Admissions.

A personal interview with a faculty member of the School, although

not a requirement, is recommended prior to final acceptance of the applicant for admission.

High School Preparation Sixteen acceptable units of high school work are required for admission. The following units are recommended:

English 4

Foreign Language 2

Chemistry 1

Physics 1

Biology 1

History and Social Studies 2

Mathematics 3

Transfer students from other accredited institutions will be given individual consideration. During the initial stages of development of the School, a program for graduates of Associate Degree and Diploma schools is not available.

Part-time study may be arranged for certain courses, but the time period in which clinical study in the professional major is offered (the sophomore through the senior years) requires, in general, that the student be in full-time residence.

It is recommended that no more than two years be devoted to part-time study; that is, students should plan to complete the program in nursing in a period of time not to exceed five years.

Health Requirements Students in the School of Nursing must meet all general University health requirements and in addition present records of currently effective immunizations against poliomyelitis, diphtheria, and smallpox. These immunizations must be kept current and annual chest X-rays are required during enrollment in the School of Nursing.

School of Nursing Scholarships

LUCY WEBB HAYES SCHOOL OF NURSING: available to selected students admitted to the School of Nursing. Tuition assistance is provided annually based on the recipient's academic performance and financial need.

THE LAURA RECKMAN MEMORIAL SCHOLARSHIP FUND: established by Alvina Reckman Myers in memory of and as a tribute to her late sister, Laura Reckman, B.S., University of Cincinnati, 1939, a Registered Nurse and a teacher of nurses, whose long and useful life was spent in unselfish service to others. Additional contributions have been made to this Fund in Memory of Charlotte I. Tennery, wife of Dean B. J. Tennery of the Law School, herself a Registered professional nurse for many years. Mrs. Tennery died on May 20, 1967. The income of this Fund will provide annual tuition assistance to a needy and deserving female student in the Lucy Webb Hayes School of Nursing.

NURSING STUDENT LOANS: Under the Nurse Training Act of 1964, full-time students indicating a need for financial aid who are in good standing with the School are eligible to borrow up to \$1000 per academic year.

ARMY STUDENT NURSE PROGRAM: Funds for tuition, fees and maintenance are available to students at the beginning of the Junior year for those who wish to participate in the program.

Degree Requirements Students in the School of Nursing must complete the general University Requirements stated in the General Information Section of this bulletin. Additional courses in the natural sciences which are related to nursing are required. Courses of the nursing major account for approximately one-half of the minimum requirements for graduation. Courses are distributed according to the curricular plan which follows.

CURRICULAR PLAN

FRESHMAN YEAR

Fall Semester

- 15.110** General Chemistry I (4)
- 9.110** General Biology I (4)
- 23.100** Composition and Reading I (3)
- 57.200** General Psychology (3)
- 49.010** Freshman Physical Education (0)
(14 hours)

Spring Semester

- 15.111** General Chemistry II (4)
- 9.111** General Biology II (4)
- 23.101** Composition and Reading II (3)
- 65.200** Introduction to Sociology (3)
- 49.020** Freshman Physical Education (0)
(14 hours)

SOPHOMORE YEAR

Fall Semester

- 9.330** Human Anatomy and Physiology I (4)
- 9.340** Microbiology (4)
- 46.200** Nursing I (7)
- 49.030** Physical Education Activities (0)
(15 hours)

Spring Semester

- 9.331** Human Anatomy and Physiology II (4)
- 57.400** Child Psychology (3)
- 46.201** Nursing II (8)
- 46.440** Individual and Group Dynamics I (1)
- 49.030** Physical Education Activities (0)
(16 hours)

JUNIOR YEAR

Fall Semester

- 46.300** Nursing III (10)
- 46.441** Individual and Group Dynamics II (1)
- Philosophy Elective (3)
(14 hours)

Spring Semester

- 46.310** Maternal-Child Nursing (10)
- 3.201** Introduction to Cultural Anthropology
(13 hours)

Summer Session: 5 weeks*

*Electives (Humanities) (6)

SENIOR YEAR

Fall Semester

- 46.400** Public Health Nursing (6)
- 46.340** Psychiatric Nursing (6)
- Elective (Humanities) (3)
(15 hours)

Spring Semester

- 46.420** Organization of Patient Care Services
- 46.430** History and Analysis of Nursing (3)
- 46.410** Problem Analysis in Patient Care (4)
- Elective (3)
(14 hours)

* The six (6) hours in Electives (Humanities) may be taken during any Summer Session or during the regular semester with the permission of the advisor.

COURSES OF INSTRUCTION

46.200 Nursing I (7)

An introduction to the profession of nursing including the study of the health needs of individuals, families and communities; the assessment of nursing needs; and clinical practice in meeting the uncomplicated needs of selected patients. Five hours of lecture or seminar, eight hours of laboratory.

Prerequisite: successful completion of the courses of the freshman year of the program.

46.201 Nursing II (8)

Course content includes the body's reaction to illness and injury; care of patients whose needs are complicated by disease; care of the patient undergoing surgical treatment. In the clinical laboratory students plan, implement and evaluate nursing care for patients with selected medical-surgical conditions. Knowledge from pharmacology, nutrition, psychiatry, community health, rehabilitation, gerontology, and disaster nursing is incorporated in this course. Five hours of lecture or seminar, twelve hours of laboratory.

Prerequisite: 46.200.

46.300 Nursing III (10)

A continuation of 46.201, Nursing II. Increased time in the clinical laboratory gives the student opportunity to develop greater skill in planning, implementing, and evaluating nursing care of patients whose needs are complicated by the presence of disease and who are treated medically and/or surgically. Six hours of lecture or seminar, sixteen hours of laboratory.

Prerequisite: 46.200, 46.201, 46.440. (Ind. & Grp. Dy. I)

46.440 Individual and Group Dynamics I (I)

Course content includes personality organization and development, interpersonal and intergroup relationships. This course is taught concurrently with 46.201 and whenever possible is correlated with it.

Prerequisite: 46.200.

46.441 Individual and Group Dynamics II (I)

Course content includes further development of interpersonal and intergroup relationships. Emphasis is placed on group process and work in small training groups. This course is taught concurrently with 46.300 and whenever possible is correlated with it.

Prerequisite: 46.200, 46.201, 46.440. (Ind. & Grp. Dy. I)

46.310 Maternal-Child Nursing (10)

Principles of growth and development related to the health of mothers, children and the family as a unit are emphasized. The student has experience in caring for mothers at various stages throughout the maternity cycle and for sick children from birth through adolescence. Five hours of lecture or seminar, twenty hours of laboratory.

Prerequisite: 46.200, 46.201, 46.300, 46.440. (Ind. & Grp. I, II).

46.340 Psychiatric Nursing (6)

Course content focuses on psychopathology resulting from repeatedly poor crises resolution and on pathology as an adaptive behaviour. Emphasis is placed on application of individual and group dynamics principles previously studied throughout the curriculum. Laboratory experiences include care of patients in both the acute and chronic stages of mental illness in the hospital and other community health agencies. Seven hours of lecture or seminar and twenty hours of laboratory for one-half of the semester.

Prerequisite: senior standing.

46.400 Public Health Nursing (6)

Emphasis is placed on the application of community health principles which have been included throughout the courses of the nursing majors. Additional course content and experience with services to patients, families, and the community are provided. Seven hours of lecture or seminar, twenty hours of laboratory each week for one-half of the semester.

Prerequisite: senior standing.

46.410 Problem Analysis in Patient Care (4)

This course deals with problems presented by the acutely or chronically ill patient who has complex nursing needs. The student assumes increased responsibility for planning and administering nursing care to meet these needs. Four hours of lecture or seminar, sixteen hours of laboratory each week for one-half of the semester.

Prerequisite: senior standing.

46.420 Organization of Patient Care Services (4)

Through participation in class and clinical laboratory, the student learns basic principles in the management and supervision of nursing care for groups of patients. Provision is made for utilizing these principles in working with both professional and auxiliary personnel. Four hours of lecture or seminar, sixteen hours of laboratory each week for one-half of the semester.

Prerequisite: senior standing.

46.430 History and Analysis of Nursing (3)

This course traces the development of nursing from antiquity to the present day and considers the relationship of this development to problems in nursing organization and practice in contemporary society. Three hours of lecture or seminar.

Prerequisite: senior standing.

FACULTY

DHILLON, GITA L., *Assistant Professor of Nursing*. B.Sc., Christian Medical College Hospital; M.Ed., Teachers College, Columbia University.

DRISCOLL, ANN E., *Assistant Professor of Nursing*. B.S.N., St. Anselm's College; M.S., Boston University.

FINN, PATRICIA A., *Assistant Professor of Nursing*. B.S., M.S., The Catholic University of America.

GIMBLE, JOSEPHINE G., *Assistant Professor of Nursing*. B.S., The American University; M.S.N., The Catholic University of America.

GORDON, L. FRANCES, *Assistant Dean and Associate Professor of Nursing*. B.S., The College of William and Mary; M.S., Western Reserve University.

KALISCH, BEATRICE J., *Assistant Professor of Nursing*. B.S.N., University of Nebraska; M.S., University of Maryland.

KUMMER, LAURA B., *Dean and Professor of Nursing*. B.S., University of Pittsburgh; M.S., Western Reserve University; Ed.D., Indiana University.

RANDALL, MILDRED N., *Assistant Professor of Nutrition*. B.S., M.S., Western Reserve University.

REDMOND, GEORGINE R., *Assistant Professor of Nursing*. B.S., College of Mt. St. Vincent; M.A., New York University.

SUMMERLIN, EDITH B., *Assistant Professor of Nursing*. B.S., Ohio State University; M.S., The Catholic University of America.

WEED, FRANCES S., *Assistant Professor of Nursing*. B.S.N., Duke University; M.S.N., The Catholic University of America.

WILKAS, BARBARA J., *Assistant Professor of Nursing*. B.S., University of Connecticut; M.A., Teachers College, Columbia University.



INDEX

A

ABD status, 42
Absences, 22
Academic Information, 12-48
Academic Loan, 19
Academic Probation and Dismissal, 31
Academic Regulations, 18-23, 36-43
Academic Requirements, General
 University:
 Graduate, 38
 Undergraduate, 29
Accounting Major, 285
Accreditation, 11
Adds, 20
Administration, Governmental, 331
Administration, University, 8
Admission:
 Graduate, 36
 Non-Degree, 411ff
 Undergraduate, 24
 Early, 26
 Freshman, 25
 Transfer, 26
Admission Procedures, 37, 24
Re-admission, 27, 43
Admission Standards, 36
Advancement to Candidacy:
 Graduate Degrees, 38
Advanced Placement and Advanced
 Standing, 26
Advertising Program, 296
American Government,
 Major in, 331, 369
Anthropology, Department of, 60
 Course Listing, 62
 Degree Requirements, 60
 Faculty, 60
Archival Administration, 138, 368
Area Studies Program, 33, 154
Art Education Major, 65
Art, Department of, 65
 Course Listing, 67
 Degree Requirements, 65
 Faculty, 65
Art History Major, 65
Arts and Sciences, College of, 49
 Administrative Officers, 230
 Faculty, 231
 Graduate Programs, 54
 Undergraduate Programs, 50

Assistantships, 17
Associate Degrees, 25
Athletic Program, 17
Auditors, 19
Automatic Data Processing:
 See "Computer Systems"
Average Requirement, Grade:
 Graduate, 38
 Non-Degree, 425
 Undergraduate, 28

B

Bachelor's Degrees, 25
 Requirements, General, 29
Banking Program, 291
Biology, Department of, 74
 Course Listing, 75
 Degree Requirements, 74
 Faculty, 74
Board of Trustees, Listed, 9
Bookstore, 15
Broadcasting Major, 89
Business Administration Major, 249, 258
Business Administration, School of, 249
 Academic Regulations
 Administrative Officers, 307
 Certificate Programs, 268
 Course Listing, 283
 Faculty, 307
 Honors, 281
 Graduate Programs, 258
 Student Activities, 282
 Scholarships, 279
 Undergraduate Programs, 249
Business Economics, 290
Business, General, Major, 253
Business Law, 287
Business Management, 287

C

Calendar, Academic, 4
Candidacy, Advancement to:
 See School or Department; also, 38
Center for Liberal Studies, 44
Center for Research in Social Systems, 45
Center for Technology and
 Administration, 315
Certificate Programs, See specific
 school or department; also, 418
Changes in Registration, 19
Changes in Regulations, 2
Changes in Schools and Degree
 Programs, 28, 35
Check Cashing, 15

- Chemistry, Department of, 80
 - Course Listing, 82
 - Degree Requirements, 80
 - Faculty, 80
- Church Music Major, 184
- Church Management, 289
- Class Standing, 27
- College of Continuing Education, 411
- Commencement, 24
- Commercial Banking, 291
- Communication Department, 89
 - Course Listing, 92
 - Degree Requirements, 89
 - Faculty, 89
- Comparative Government, 331, 350, 357, 369
- Comprehensive Examinations, 39, 42
- Computer Systems Major, 315, 287
- Consortium of Universities, 24, 34
- Construction Program, 299
- Continuing Education, College of, 411
 - Administrative Officers, 426
 - Certificate Programs, 418
 - Graduate Programs, 422
 - Non-Degree, 20
 - Off-Campus Study, 411
 - Undergraduate, 20
- Correctional Administration Major, 411, 422
- Costs, 17
- Counseling and Testing Programs, 13
- Counseling Psychology Major, 212
- Course Numbering System, 46
- Course Requirements, General:
 - Doctoral, 38
 - Master's, 38
 - Undergraduate, 29
- Course, Hours, 38
- Courses of Study, 31 (see individual Schools and Departments)
- Credit Hours, Definition, 46
- Cultural Opportunities, 12
- Curricula, 45

D

- Damage to Equipment, 14
- Data Processing, See Computer Systems
- Deferred Payment, 17
- Degree, Application for, 24
- Degree Programs, Changes in, 28
- Degree Requirements, 24
- Degrees and Curricula, 25, 32
- Design Major, 66
- Distributed Sciences Major, 151

- Dismissal, Academic:
 - Doctoral, 45
 - Master's, 40
 - Non-Degree, 411ff
 - Undergraduate, 29, 57
- Dissertation, Doctoral, 41
 - The ABD Status, 42
- Distributed Sciences Major, 151
- Doctoral Degrees, 33
- Dormitory Costs, 17
- Dormitory Facilities, 14
- Dramatics, 16

E

- Earth Sciences, Department of, 97
 - Course Listing, 98
 - Degree Requirements, 97
 - Faculty, 97
- Economics, Business, 290
- Economics, Department of, 102
 - Course Listing, 105
 - Degree Requirements, 102
 - Faculty, 102
- Education, Department of, 113
 - Course Listing, 119
 - Degree Requirements, 113
 - Faculty, 113
- Education, Physical, 133
- Education, Professional Certificate in, 119
- Employment Opportunities, 17
- English, Department of, 126
 - Course Listing, 128
 - Degree Requirements, 126
 - Faculty, 126
- Enrollment (size) 11
- Entrance Examinations, 25, 37
- Evaluation of Grad. Students, 38
- Examinations for Placement and Waiver, 27
- Examination Requirements, 39
- Examination Timetable, 39
- Examination Fields, 40
- Examination Grading, 40
- Examination Grading Variations, 40
- Re-Examination, 40

F

- Facilities, University, 12
- Fees, 17
- Fellowships, 17, 36
- Finance Major, 293
- Financial Aid, 17

- Financial Assistance, 17, 36
- Financial Policy, Government, Curriculum of, 366
- Financial Transactions, 15, 17
- Fine Arts Major, 65
- Fine and Communicative Arts, 65
- Fiscal Program, 331, 366
- Food Marketing, 296
- Food Service, 15
- Foreign Language Course Regulations, 28
- Foreign Language Requirement, 28, 39
- Foreign Service, Major, 377, 381
- Foreign Students, 20, 342
- Foreign Student Adviser, 14
- French Major, 153
- Freshman Forgiveness Rule, 22

G

- Geology (see Earth Sciences)
- German Major, 153
- Government Major, 331
- Government and Public Administration, School of, 331
 - Administrative Officers, 370
 - Course Listing, 349
 - Faculty, 370
 - Graduate Programs, 343
 - Undergraduate Programs, 331
- Government, Student, 16
- Government Workshop Abroad, 44, 369
- Grade Average Requirement:
 - Doctoral, 38
 - Master's, 38
 - Non-Degree, 411
 - Undergraduate, 28
- Grade Reports, 24
- Grading System, 21
- Graduate Credit for Seniors, 28
- Graduate Education, 31
- Graduate Record Examination, 51
- Graduate Studies, 32
 - Admission, 36
 - Candidacy, 38
 - Comprehensive Examinations, 40
 - Degrees and Majors, 32
 - Dissertations and Theses, 41
 - Grade Average Requirement, 20, 38
 - Oral Examinations, 41, 42
 - Residence Requirements, 38, 31
 - Statute of Limitations, 43
 - Tools of Research, 40, 43

- Graduate Study Registration, Required (Graduate Study Fee), 42
- Graduate Work (types), 32
- Graduation, Application for, 24
- Graduation Requirements, 28
- Greek, 161

H

- Health, Physical Education and Recreation, Department of, 133
 - Course Listing, 134
 - Degree Requirements, 133
 - Faculty, 133
- Health Services, 15
- History, Department of, 138
 - Course Listing, 142
 - Degree Requirements, 138
 - Faculty, 138
- History of the University, 11
- Honor Awards, Scholarships, 36
- Honorary Societies, 16
- Honors Courses, 31
- Honors Curriculum, 56
- Honors Departmental, 56
- Honors, English, 56
- Honors, General, 56
- Honors, Graduation, 29
- Hospital Training Program, 150
- Housing Costs, 17
- Housing Facilities, 14
- Humanities Symposium, 59

I

- Incomplete Grades, 21
- Independent Study Courses, 22
- Industrial Relations, Personnel and Manpower Management Major, 292
- Information Systems, Management, 322, 323, 324
- In-Service Programs, 44
- Institutes, Professional, 43, 272, 303
- Insurance Plan, Student, 15
- Insurance Program, 299
- Inter-College Programs, 369
- Interdepartmental Courses (Listed under Economics, Government, or International Service), also 33, 151
- Interdisciplinary Study, 33
- Interior Design Major, 65
- International Business Major, 272, 293
- International Christian Service Major, 377, 382
- International Labor Major, 377, 383
- International Studies Major, 377, 380
- International Service Major, 377, 381

International Service, School of, 377
Administrative Officers, 410
Course Listing, 389
Faculty, 410
Graduate Programs, 384
Undergraduate Programs, 378
Investment Program, 292

J

Journalism, Public Relations and
Broadcasting, Department of,
See Communication Department

L

Land Management, 299
Language and Area Studies, degrees in,
154, 157, 377, 383
Languages and Linguistics, Department
of, 153
Course Listing, 159
Degree Requirements, 153
Faculty, 153
Language Course Regulations, 28
Language Requirement, 28
Late Registration, 19
Latin, 163
Law, Washington College of (see
separate catalog)
Lectures, Special, 44, 58, 59
Liability, University, 18
Liberal Studies Center, 44
Library, 12
Linen Rental, 15
Linguistics Major, 153
Load, Academic, 19
Loans, 17
Logistics, 302

M

Mail Service, 15
Major, Change of, 28
Major, Declaration of, 27
Major Fields of Study:
Graduate, 31
Undergraduate, 25
Major, Performance in, 28
Major Requirements, 28, 32
Management Development, 306
Management, Business, 287
Management Information Systems,
315, 323

Management, Public Administration,
363

Managerial Program, 294

Marketing Major, 295

Master's Degrees, 32

Mathematics and Statistics, Depart-
ment of, 172

Course Listing, 175

Degree Requirements, 172
Faculty, 172

Meal Service, 15, 17

Medical Technology Major, See Biology

Metropolis, the, Study, 352, 361

Motor Vehicles, 21

Music, Department of, 183

Course Listing, 187

Degree Requirements, 183
Faculty, 183

Music (Student groups), 16

N

Non-Degree Status, 20

Non-Thesis Option (Master's), 41

Nursing, Lucy Webb Hayes School
of, 427

Course Listing, 431

Degree Requirements, 429
Faculty, 433

O

Off-Campus Programs, 44, 411

Officers of Administration, 8

Operations Research, 321

Oral Examinations (Doctoral), 41, 42

Overseas and International Labor
Major, 377, 383

Overseas Business Major, 377, 381

Overseas Representation Major, 377, 382

P

Parking Permits, 21

Painting and Sculpture Major, 65

Pass-Fail System, 22

Personnel Management Program,
292, 367

Philosophy and Religion, Department
of, 194

Course Listing, 197

Degree Requirements, 194
Faculty, 194

Physical Education Activities:
Requirement, 30

Physical Education Major, 133
 Physics, Department of, 201
 Course Listing, 203
 Degree Requirements, 201
 Faculty, 201
 Pi Sigma Alpha, 337
 Placement Center, 14
 Police Administration Major, 354, 411
 Political Science Major, 208, 338
 Political Theory Major, 350
 Pre-Law Major, 257
 Pre-Medical Program, See Biology
 Pre-Professional Programs, 268
 Probationary Actions, 31
 Production (Industrial) Management
 Major, 297
 Professional Societies (Students), 16
 Professional Standing, 37
 Programs, Special, 46,
 Psychology, Department of, 210
 Course Listing, 212
 Degree Requirements, 210
 Faculty, 210
 Public Administration Degree, 331, 363
 Public Administration: Technology
 of Management Major, 331, 341
 Public Law Program, 351, 360
 Public Relations Major, See Com-
 munication Dept.; also, 298
 Public Safety Program, 354, 411
 Publication, Dissertation, 42
 Publications, Student, 16
 Purchasing Program, 298

R

Reading Courses (Individual), 22
 Re-Admission, 26, 39, 43
 Real Estate Major, 299
 Refunds, 17
 Registration, 18
 Registration, Changes, in 19
 Registration, Late, 19
 Registration, Required Graduate, 42
 Regulations, University, 18
 Religion Major, 194
 Religious Organizations, 16
 Repeated Courses, 21
 Requirements, General University
 Academic, 29, 38
 Requirements, Residence, 29, 38
 Research Courses (Individual), 22
 Research and Development, 302; also
 see Center for Technology and
 Administration, 315
 Residence Costs, 17

Residence Facilities, 14
 Residence Requirements, 31, 29
 Responsibility, Student, 18
 Retailing, 297
 Russian Major, 153

S

Sales Program, 297
 Scholarships, 17, 36
 Science Programs, Interdepart-
 mental, 33, 151
 Science Teaching Major, 151
 Science Technology, 356
 Scientific Systems, 322
 Sculpture and Painting Major, 65
 Service Organizations, Student, 16
 Services, University, 13
 Social Organizations, 16
 Social Science Major, 411
 Society for the Advancement of
 Management, 337
 Sociology, Department of, 216
 Course Listing, 218
 Degree Requirements, 216
 Faculty, 216
 Spanish Major, 153
 Special Lectures, 44, 275
 Speech Arts, Department of, 224
 Course Listing, 226
 Degree Requirements, 224
 Faculty, 224
 Statistics Major, 172, 256, 302
 Statute of Limitations, Graduate, 43
 Student Accounts, Office of, 15
 Student Activities, 15; also, see individ-
 ual school or dept.
 Student Government, 16
 Summer Application, 45
 Summer Housing and Facilities, 45
 Summer Sessions, 37, 45
 Supply Store, Campus, 15

T

Teachers, Data Processing, 316
 Teacher Education, 113
 Teaching, Master of Science in, 422
 Technology and Administration, Center
 for, 315
 Course Listing, 319
 Degree Requirements, 315
 Faculty, 325
 Technology of Management Major,
 315

Thesis, Doctoral (see Dissertation)
Thesis, and Non-Thesis Options, 41
Time Permitted to Complete Degree, 43
Tool Courses, 39
Tools of Research:
 Graduate, 39
 Degree, 39
Traffic Program, 302
Transcripts, 23
Transfer Credit:
 Graduate, 38
 Undergraduate, 28
Transportation, Logistics and Traffic
 Management Major, 256, 302
Trustees, Board of, 9
Tuition, 17

U

Undergraduate Studies, 24
 Admission, 24
 Degrees and Majors, 25

 Grade Average Requirement, 29
 Requirements, General University, 29
 Residence Requirement, 29
University Requirements Program, 29
 Graduate Requirements, 38
Urban Affairs, 334, 361

V

Veteran's Information, 20

W

Waiver (Undergraduate Academic
 Requirements), 27
Washington Semester Program, 44, 331f
Withdrawals from Courses, 19
Worship Services, 15





FEB. 71

N. MANCHESTER,
INDIANA



